A Lecture ON PEMPHIGUS.

Based upon a Clinical Lecture delivered at St. Thomas's Hospital and a Post-graduate Lecture delivered at the Hospital for Diseases of the Skin; enlarged, with additional cases.

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INTRODUCTION.

THE name "pemphigus" doubtless belongs to a definite and recognisable disease, but as it has been vaguely employed to denote several conditions—allied indeed, but really distinct—some preliminary disentanglement of these different forms appears to be necessary. We recognise the following diseases as being more or less accurately denoted by this name:—1. Pemphigus vulgaris, of which there is an acute febrile form and also a chronic or recurrent form. 2 Pemphigus foliaceus, an extremely rare disease. 3. Pemphigus vegetans, one perhaps still rarer. More doubtfully deserving of the name are: 4. Congenital traumatic pemphigus, a state of the skin that is mostly congenital, sometimes being called "dermatolysis hereditaria bullosa." 5. The so-called pemphigus neonatorum. There is also a bullous syphilide that is sometimes called "pemphigus syphiliticus," being partly merged in the last-named form, but in very rare cases affecting adults. In addition to these we meet with forms of disease resembling pemphigus, which were formerly included under that name, but are now called by such names as erythema bullosum, dermatitis herpetiformis, hydroa, herpes gestationis &c., of which I defer the consideration. The only character common to all forms of pemphigus is that the eruption consists of bullæ, blebs or blisters. I say consists of and not merely displays bullæ, because these lesions occur in several other skin diseases in which they do not compose the whole eruption. They may be found in eczema and in scabies by confluence of vesicles, in one form of impetigo or ecthyma, in herpes and in a rare form of syphiloderma, and as a complication of erythema, of urticaria and of lichen planus. As the bulla or bleb is the characteristic lesion of pemphigus we must first define more precisely what we mean by this term. We mean a detachment of the outer layers of epidermis by effusion of fluid beneath it, larger than the vesicles of eczema or of herpes. Now it is a familiar fact that this lesion of the skin can be produced by a variety of irritants, by mechanical friction, by heat, by cold and even by electricity, as is seen occasionally in the effects of powerful induced currents traversing the body, and by chemical irritants such as cantharides. The only essential condition is that the irritant should be one of sufficient intensity and that it should be transient. In speaking of erythema in a former lecture I pointed out that this affection is one which precisely reproduces the effect of a slight transient irritation of the skin. Now it is true that the characteristic lesion of the skin in eczema may be produced by traumatic causes, as Hebra insisted on, but it is by a more prolonged irritation, and a certain length of time appears to be necessary for its production. Moreover, a certain susceptibility of the skin seems to be requisite, for in some people it is difficult, if not impossible, to set up eczema, and the injury may be carried to the point of producing deep suppuration or sloughing without a true eczema resulting. However, the question of traumatic eczema is a difficult one, and one which we cannot discuss fully now. Leaving this on one side we may define erythema as the disease which reproduces—or, it may be, simulates—the effect of a slight transient irritation of the skin, and pemphigus (or the bullous diseases generally) as a condition which reproduces the effect of a more severe, but still a transient injury, such as that produced by heat, friction or chemical irritants. It does not follow, of course, that either of these diseases is produced by the cause, the effects of which it simulates—that is, by an external irritation; in fact, this is obviously not the case. The various forms of erythema result from certain internal causes which only simulate the effect of an external irritant; and so with pemphigus. This disease never results from traumatic causes, except in the one doubtful form which I have called "congenital traumatic pemphigus," to which the name is not strictly applicable; but we may say that pemphigus is produced by some internal cause, which produces the same disturbance of nutrition, or broadly the same inflammation, of the skin as may be caused by certain external irritants. This constitutes, I think, the best definition of the disease. One important clinical fact is brought out by this definition—namely, the close alliance between pemphigus and erythema. The lesions of the skin in the two diseases differ only in degree, since they may be reproduced or irritated by the same irritant acting in different degrees of intensity, whilst the general clinical symptoms are in certain cases very much alike. The great difference is that whilst erythema is nearly always acute or transient pemphigus is nearly always chronic or persistent; nevertheless, persistent forms of the former and transient forms of the latter are not unknown. There are also certain cases which would formerly have been described by all physicians as pemphigus, which some modern writers would call "erythema bullosum." Possibly it may some day be necessary to place erythema and pemphigus in one class.

GENERAL CHARACTERS OF PEMPHIGUS.

The disease strictly called pemphigus begins with the production of bullæ on the surface. These in the most typical cases start up suddenly on uninflamed skin, so that they are nothing but pale blisters filled with clear fluid. In other cases the spots become at first red or erythematous before the bulla is developed. At first they may be not larger than a pea or even less, but increase in size till they have a diameter of half an inch or an inch; more rarely large blisters two or three inches across are produced. After a day, or even less, a red margin or areola is formed round the bulla, whilst its serous contents become turbid and often purulent. In these respects its evolution is not unlike that of a variolous or vaccine vesicle. The erythematous areola is a secondary development. When, on the other hand, a considerable erythematous area is formed, part of which only becomes developed into a bulla, the eruption is not what we now call pemphigus, but it is termed "erythema bullosum hydroa" or "dermatitis herpetiformis." When these cases were included under the term "pemphigus"—as, for instance, they were by Hebra—the definition of pemphigus was wider or less rigid than it is now. To return to the bullæ. Each bulla increases for a few days only, when it bursts and usually becomes covered with a scab, under which is an excoriated but not ulcerated surface. This may be long in healing. In mild cases the bullæ may dry up without excoriation, especially when the disease is being successfully treated. In all cases a deeply pigmented macula remains, which fades slowly. The bullæ appear in successive crops, sometimes with a few days' interval. They may begin on any part of the body. I have records of cases beginning on the face, on the extremities and on the trunk; but they spread over the body till a considerable part or nearly the whole of the surface may be involved. How this extension occurs is a matter of some uncertainty. Hebra asserts positively that he was never able to produce the eruption by inoculation of the secretion either into unaffected portions of the patient's own skin or into that of another person. When the bullæ occur, as they often do, simultaneously in distant parts—as, for instance, on two extremities—it is evident that local inoculation is out of the question. Nevertheless, I think that sometimes fresh lesions are produced by a sort of infection or inoculation from those already existing. One of my patients, a man of intelligence and an accurate observer, amused himself with watching the spread of the eruption over his body and he was confident that the fluid from the bullæ, running on to healthy portions of skin, produced new spots; but it is possible that this effect is rather traumatic than infective. In addition to the skin eruption there is sometimes a similar affection of the mucous surfaces. The mouth and pharynx I have seen covered with blebs, and one fatal case is recorded by Dr. Cheadle where ulcers, apparently originating in the same way, were found in the intestinal canal. They have also been observed in the vagina, and the remarkable affection called "pemphigus of the conjunctiva" appears to be anatomically the same. I have seen only one case of this disease. In it there were some bullæ on the face as well, and other cases are on record in which it was associated with

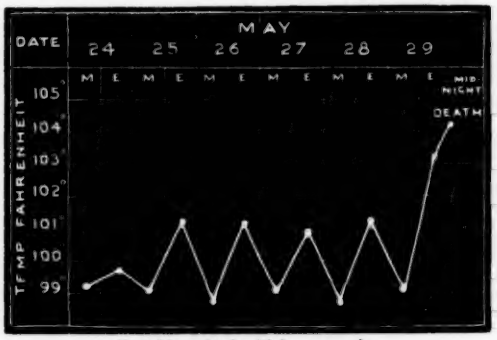
more or less general pemphigus of the skin.[1] The eruption alone of pemphigus constitutes a painful and, when it is general, a most afflicting disease; but the eruption is not the whole of the complaint, it is often accompanied by grave constitutional symptoms which may even be fatal. In describing the symptoms we are met by a difficulty. Are we to speak of an acute and a chronic pemphigus—of a febrile and a non-febrile form? In former times it was the custom to speak of an acute pemphigus as being a febrile disorder, like the acute exanthemata, accompanied by a bullous eruption as its special exanthema; but this was not admitted by the founders of modern dermatology. Willan defined pemphigus as being a non-febrile disorder, and Hebra absolutely denied the existence of a febrile pemphigus. Still, several well-marked cases of this kind have been recorded, and I myself have notes of at least eight cases with high fever. From my own experience I should conclude that the occurrence of considerable fever in severe cases of pemphigus is the rule rather than the exception. However, to a certain extent Hebra's objections are borne out by the fact that most of these acute outbreaks were preceded—or if not preceded were followed—by chronic pemphigus—the pemphigus diutinus of Willan—of the usual type; so that they were rather acute paroxysms of a chronic disease than attacks of an acute self-limited disease like the exanthematous fevers. The cases which I am now about to relate will, I think, bear out this statement.

CASE 1.—This case I have described at length in the St. Thomas's Hospital Reports,[2] with a full table of temperatures.

A man aged seventy was admitted to St. Thomas's Hospital on Nov. 29th, 1881. He had suffered from pemphigus for eight months. There was nothing important in his previous history except that he had passed gravel and once a small stone. It was also stated that he had undergone much anxiety. He was in a cachectic and prostrate condition and suffered from an extensive and severe eruption of large bullæ, chiefly on the arms, neck and trunk, but less so on the legs. The thoracic and abdominal viscera presented nothing abnormal and the urine contained no albumen or sugar. The bowels were generally constipated, with occasional diarrhœa. The lesions of the skin had been much neglected and were covered with crusts of dried serum and epidermis with a very offensive odour. The temperature on admission was 101° F. and the next day it was 102·5°. From this time for a month it was uniformly febrile, ranging from 100° to 102°, with occasional intervals of normal temperature for a day or two. Then followed a non-febrile period of three weeks and a febrile period of a fortnight, so that for the greater part of two months the temperature was persistently febrile. The rises of temperature were generally accompanied by an increase of the eruption, but more notably by grave and alarming nervous symptoms. There were insomnia and much delirium, so that the patient was with difficulty kept in bed, with extreme muscular weakness and depression. More than once he was not expected to recover, and was only sustained by careful feeding and the free exhibition of stimulants. These symptoms however passed away, and he was discharged from hospital at the end of six weeks in good general health, with a single bulla on one hand. During subsequent treatment as an out-patient there were several slight relapses, and it was not till June 1st, six months after admission, that he was pronounced recovered, and no subsequent relapse was known to occur.

CASE 2.—A man aged thirty-eight was admitted into St. Thomas's Hospital under the care of Dr. Bristowe on March 9th, 1882, suffering from pemphigus. The personal history showed that the patient had had an attack of the same disease three years earlier, which lasted for five months, and he had also had a slight one twelve months before. The present attack commenced one month before admission. He was a well-nourished man complaining of severe smarting all over his body. There were scattered bullæ of various sizes on the front and sides of the trunk and on the face, arms and legs. The larger bullæ were filled with clear serum, and some of the smaller ones were pustular—and these were many,—dried and scabbed over. The thoracic and abdominal viscera and the urine were normal; the bowels were confined; the skin was moist and perspiring. He suffered from insomnia, but no delirium; there was occasional convergent strabismus. The temperature on admission was 102·8° F., and for the next thirty days the patient was always febrile at some period of the day, the temperature occasionally rising to 102°, but it was generally a little above 100° or at least 99·8°. It was only occasionally normal in the mornings. After this for about three weeks it was approximately normal, but then for the last month till his discharge on May 26th it showed about the same fluctuations as in the first month. The eruption presented the usual recurrence of fresh crops of bullæ, which were sometimes tinged with blood. On one occasion bullæ appeared on the tongue and on the insides of the cheeks, as was said to have been the case before his admission to hospital. On discharge, after having been eleven weeks in hospital, he was nearly well, but the temperature was still occasionally high. The treatment was chiefly by arsenic internally.

CASE 3.—This is a remarkable case, on account of the short duration of acute symptoms and the hyperpyrexial termination. A man, aged seventy-three, was admitted into St. Thomas's Hospital on May 20th, 1886, and died on May 30th. The patient's previous history showed that his health had been good, and he had had no serious illness except pemphigus, which had begun three years before, and had never entirely disappeared. For six weeks he had been an out-patient under my care, but, finding his general condition worse, I recommended him as an in-patient, under the care of Dr. Stone. On admission he was a healthy looking man, suffering from an eruption of large and small bullæ, which affected nearly every region of the body, including the palms and soles, with traces of many more which had healed. They first appeared as pale, clear blisters, which afterwards became inflamed. There was considerable irritation. The chest showed signs of chronic bronchitis and emphysema. A faint systolic murmur was heard at the apex of the heart, and there was a trace of albumen in the urine, but not enough to show organic disease of the heart or kidneys. His temperature on admission was 99·4° F., but the next day rose to 101·4° in the evening, and after this the evening temperature was never, except once, below 101°. Four days after admission noisy delirium at night set in, whilst the eruption showed no improvement. On the succeeding days the delirium continued, even in the morning, but especially at night, in spite of the administration of opium and warm baths as sedatives. On the 29th a rather sudden change occurred in the nervous state. The patient became semi-comatose, had muscular twitchings in the arms and legs, refused food and lost control over the bladder. At the same time the temperature began to rise rapidly, as seen in the chart, till about midnight. Shortly before death it was 104·2°. Although not excessively high, this temperature in a man aged seventy-three was virtually that of hyperpyrexia, especially considering the rapid rise ending in death, and was evidence of the profound affection of the nervous system. I append the temperature chart of the last six days. No post-mortem examination was obtained. The patient had been treated with arsenic as an out-patient, but, notwithstanding this, severe exacerbation ensued.



Pemphigus, fatal, with hyperpyrexia.

CASE 4.—A man aged sixty was seen by me in consultation with Dr. W. Edmunds in November, 1891. He was a fine, robust man of great energy, both physical and intellectual. He had been very intensely occupied with business, but otherwise was in good heath, when this severe febrile eruption, which had then lasted for two months, broke

[1] A case is reported by Messrs. Malcolm Morris and Leslie Roberts, with references to twenty-seven others, in the British Journal of Dermatology, vol. i., p. 175, 1889.

[2] Vol. xii., p. 193.

out. His previous history showed no notable illness, but he had a liability to bronchitis. The eruption consisted entirely of bullæ of various sizes up to two inches in diameter or more and in various stages of development, many having broken so as to form serous and painful excoriated sores and sores covered with scabs. It was present on every region of the body, so as to be nearly universal. There were also bullæ, some broken, inside the mouth and, so far as could be seen, on the fauces; but examination was difficult owing to the great soreness of the mouth, which made eating painful. There was bronchitis of the large tubes, but whether this was due to any affection of the air passages resembling pemphigus could not be ascertained. On auscultation of the heart a systolic mitral murmur was heard, which disappeared later, but was again audible a year afterwards, so that it doubtless indicated valvular disease. The urine was normal and there was no sign of other visceral disease. The temperature was decidedly raised, being 100·8° F., and during the greater part of the attack it was a little over 100° in the evenings, but normal in the mornings. So far as I could learn no delirium or special nervous symptoms accompanied the fever, but there was a rapid and weak pulse with considerable prostration. The patient stated that when the spots first appeared there was some itching, but then there was only a feeling of intense soreness, tenderness and discomfort. The treatment consisted of arsenic internally, with various local measures for the relief of discomfort, and in five weeks (three months from the commencement of the attack) the eruption was quite gone. In March, 1892, an eruption of small blebs recurred on the face and head, with some itching, but it soon yielded to treatment. (I noticed a transverse furrow across the nails about half-way up, the nail beyond this being longitudinally striated and brittle; this evidently marked the date of the former attack). In September, 1892, there was a recurrence, rather more severe than the last, but less so than the original attack. It was, however, complicated with a severe carbuncle. Since then the patient has, I believe, been free from his complaint. His skin, I may say, has become deeply pigmented from the use of arsenic.

CASE 5.—A girl five years old was first under my care as an out-patient, and was admitted to St. Thomas's Hospital on Oct. 24th, 1888. The family history showed nothing important. The child had enjoyed good health till eleven days before admission, when she had been frightened by seeing another child run over and had lost her appetite. Three days later an eruption appeared on the body. On admission the patient was found to be a well-nourished child, with an eruption of bullæ on the chest, back and abdomen and on the arms, legs and forehead. The largest bullæ were on the arms and legs, being two inches in diameter, whilst those on the body were from half an inch to one inch. They were mostly transparent and serous, but a few were purulent. The recent bullæ had no areola, but those of older date were surrounded by an inflammatory margin. There were marks of several which had faded away. The abdominal and thoracic viscera were normal and there was no albumen in the urine. The axillary and cervical lymph glands were slightly enlarged and were also tender. The pulse was 128, the respiration was 20 and the temperature was 100·8° F. The eruption continued to spread and fresh bullæ appeared in successive crops, the child becoming weaker; she was very irritable and slept badly. This condition lasted till Nov. 15th, or for three weeks. The temperature during the whole of this time was febrile, not being normal on any one day. In the evening it was usually from 100° to 101° and on a few occasions it rose to 102°. In the morning it was usually but not always about a degree lower. About Nov. 16th the bullæ were observed to dry up more rapidly and they were fewer in number. From this time the temperature was normal. The treatment throughout consisted of the administration of arsenic in the form of liquor arsenicalis, the doses being as much as four minims thrice daily. The child was discharged quite well on Dec. 9th, but was readmitted on April 1st, 1889, with a relapse. The eruption precisely resembled the previous one, coming out in successive crops, but it was accompanied by fever, the temperature never being above 99·4°. The same treatment was pursued as before, and she was discharged quite well after about a fortnight.

This case was under my observation the whole time and was a typical one of pemphigus, without any erythema whatever. The history and alleged cause and the response to treatment made it curiously like a case of chorea, though of this disease there was no symptom.

CASE 6.—This case was not a typical one, but on the whole it seems to have been one of pemphigus accompanied by erythema according to some authorities, or of dermatitis herpetiformis according to others. A girl aged three months was admitted to St. Thomas's Hospital under the care of Dr. Bristowe on Oct. 27th. She was an anæmic but well-nourished child, with no history of previous illnesses; the family history was good, there being no sign of syphilis. The previous duration of the eruption was not stated, but it was said to have covered the whole body; though at the time of admission it was confined to the trunk and face. The middle of the chest and abdomen was occupied by a large reddened patch, which was covered with desquamating epidermis and around this there were some bullæ as large as half an inch in diameter. There were also the remains of various others which had burst, leaving reddened scaly patches. On the face was a reddened, shiny patch which covered part of each cheek, extending over the bridge of the nose to the upper lip and partly on to each eyebrow. The abdominal and thoracic viscera were normal and there were no enlarged glands. The temperature was 97·6° and the pulse was 180 and feeble. The eruption slowly faded and no fresh bullæ appeared till Dec. 11th, when a bright reddish patch developed on the left side of the forehead; on the next day a crop of vesicles appeared. Though the temperature was low on admission it subsequently became febrile, and from Nov. 4th to Dec. 12th it usually ranged from 100° to 101° in the evening and being generally normal in the morning, and on a few occasions it reached 102°. There was no complication with the exception of a slight attack of diarrhœa; but the child was not discharged as well till Dec. 21st, two months after admission. In this case it is noticeable that the febrile state did not exactly coincide with the eruption, and therefore its precise connexion with the skin lesion must be pronounced doubtful.

CASE 7.—This case is, like the last, one in which the eruption was multiform, consisting of erythematous patches as well as of blebs and vesicles, thus bringing it into the category of bullous erythema, or dermatitis herpetiformis according to modern writers, or bullous hydroa of others. A married woman aged thirty-nine was admitted into St. Thomas's Hospital on March 1st, 1887, under the care of Dr. Ord, to whom I am indebted for permission to publish the case. The family history showed that the patient's mother suffered from fits and that her father suffered from rheumatism. The mother had had four children, one of whom had an eruption of small watery spots about the joints when young. The patient had been subject to what she termed "rheumatism," but apparently not severely, and she had had no other special illness or any similar attack before the present one, which began five months before with small, red, irritable spots on the back. One month previously vesicles (or bullæ?) appeared, which spread till they covered the whole of the body and they were symmetrical on the arms and legs. The throat was very dry and sore. On admission the patient was seen to be a well-nourished and not anæmic woman. There was an eruption on the neck and ears consisting of small bullæ—some the size of peas and others as large as walnuts—without any inflamed areola, and of scars of former bullæ. On the arms the bullæ were larger and in some places confluent, measuring from an inch and a half to two inches in diameter, and there were also excoriated patches. On the back of the hand the skin was invaded by an erythematous swelling with a well-defined margin; this swelling presented a few vesicles and bullæ. The fingers and palms were unaffected. The thighs as far down as the knees were covered with a scattered erythematous eruption, which ended below the knees with a well-defined margin. There was a group of bullæ around the knee-joints. On the knees themselves there were a few bullæ developing from circular red spots, and this condition was especially marked around the ankles. There were bullæ on the feet; the soles were red and tender. On the abdomen there was a spreading red blush, with a group of bullæ round the umbilicus. Numerous small bullæ and circular excoriated patches were present on the back. The skin of the face showed a diffuse red blush and on the forehead the traces of numerous small bullæ were to be seen. Most of the bullæ contained serous fluid and a few were purulent. The throat, palate and tonsils were red and slightly swollen, but there were no enlarged glands in the neck. The thoracic and abdominal viscera were normal. The pulse was 112 and weak and the temperature was 100·2°. The urine contained a trace of albumen (which afterwards disappeared) and some mucous deposit. The catamenia were

regular and the bowels were confined. The eruption caused sensations of burning and itching. Four days after admission the erythema and bullæ had extended over the hands, the face and other parts, so that the dorsa of the feet were noted as being the only parts that were unaffected. Fresh crops of bullæ, without inflamed areolæ, appeared during the next week, until March 12th. On the 15th the face, arms and back had improved, but there were severe excoriations on the feet, thighs and buttocks. On the 24th the patient was still improving, but there were a few fresh bullæ on the face, arms and legs. As the improvement was taking place very slowly the administration of arsenic—in doses of six minims of liquor arsenicalis with four grains of iodide of potassium three times a day—was begun on March 28th, and this was continued for three weeks. During this time the greater part of the bullæ healed up, and there was a general and copious desquamation. A few fresh bullæ appeared, however, and the arsenic was resumed till May 1st (two months after admission), when the patient was pronounced to be free from eruption; but a slight relapse kept her in hospital for three weeks longer, when she was discharged quite well on May 23rd. The temperature during the greater part of the time was febrile. In the first month it was normal on five days only, but it did not rise above 100 4° in the evenings. During the second month there were longer periods of normal temperature, amounting to about ten days in all, but the maximum range was about the same. At the beginning of May it was uniformly normal.

I think that it will be agreed after hearing this account that the attack was, clinically speaking, quite similar to those I have previously described; although the eruption consisted partly of an erythematous element as well as of bullæ, and the subjective symptoms of burning and itching were more prominent. The above cases are sufficient to show the reality of acute outbreaks of pemphigus associated with fever, which mostly occur as episodes in the chronic form of the disease. I will now proceed to sketch the main features of the chronic, non-febrile form, founding my statements on records of other cases, which I need not give at length.

THE CHRONIC DISEASE.

The onset of chronic pemphigus is generally gradual, the eruption coming out, as I have said above, in successive crops, so that it is perhaps better described as a recurrent than as a strictly chronic disease. There are no regular or frequent complications, unless the presence of the same lesions on the mucous surfaces be regarded as such. Diarrhœa is not unfrequently present and may be plausibly considered to be an implication of the intestinal canal. The constitutional state seems to have little influence on the eruption, as most of the patients are certainly in feeble health, but there is no special kind of cachexia. If any system of the body is affected besides the skin it seems to be the nervous system rather than any other. Obscure symptoms of nervous depression are sometimes recognised before the eruption begins, and in the severer forms the cerebral nervous system—or at least the brain—is evidently profoundly affected, as is shown by delirium and nervous prostration. We have no reason *a priori* to assume, however, that this is not the consequence or a concurrent symptom of the disease rather than its cause. It seems to me to be a hasty and premature conclusion that any nervous affection produces the lesion on the skin; in fact, of the cause of pemphigus nothing is known, since age, hereditary tendency, previous disease, or the constitutional state has no constant influence. This being so, it is natural to suppose that it may be produced by some specific infective cause. There may be such a cause, but it is certainly quite unknown at present; whilst the entire absence of any evidence of contagion or inoculability makes its extremely improbable that it can be due to any external infection acting directly on the skin. If there be any infective virus it must be one that is received internally, producing a general infection of the whole body, of which the cutaneous eruption is a part, but any hypothesis on this subject would be purely conjectural. The morbid anatomy of pemphigus is almost entirely negative. There are very few post-mortem examinations on record, and the only significant morbid change, so far as I know, which has been found has been severe ulceration of the intestines, which was observed in one fatal case where there was severe diarrhœa. In other cases with severe diarrhœa no intestinal lesions have been found. The anatomy of the skin lesions has also been studied, but it cannot be said to have thrown much light on the morbid process. The researches of Haight, Wedl, Neumann and others have shown that there is a copious inflammatory effusion in the Malpighian layer, by which in the early stages of the affection the cells are greatly elongated, remaining attached to the elevated corneous layer; but at a later period the cavity is filled entirely with fluid. In fact, the appearances are those of a rapid but very distinctly limited exudative inflammation. The vesicle differs strikingly from that of small-pox in being simple and not loculated. The fluid contains at first very few formed elements of any kind; but in the later stages many pus corpuscles may be seen. The hypothesis that pemphigus may be due to a bacterial infection has led to careful search being made for micro-organisms. In the early stages few or none can be observed, but when the fluid becomes turbid micrococci can be found, as in most inflammatory affections of the skin that are accompanied by exudation; but they do not appear to be specific. There are two very rare forms of the disease which I shall only briefly allude to as follows. Pemphigus foliaceus is a form which usually occurs in women, and it is marked by the production of imperfect, flabby bullæ which soon break, leaving flakes of epidermis. In the only two cases I have seen some care was necessary to discover that there were bullæ at all, the general appearance being scaly. It covers the whole body and is always fatal. In pemphigus vegetans (of Neumann) granulations grow from the bases of the ruptured bullæ, forming papillomatous vegetations. I have never seen a case, but two or three have been observed in this country. It appears to be always fatal. These varieties have, however, little practical importance.

PROGNOSIS OF PEMPHIGUS.

The prognosis of pemphigus is generally favourable for acute attacks, especially in the young, but it is unfavourable as regards ultimate recovery. The severe attacks of the disease are accompanied by considerable danger to life in elderly persons; in the young, however, recovery may be confidently anticipated under suitable treatment; but even in such cases there is a great probability of recurrence. Patients sometimes suffer from repeated attacks, prolonging the disease over several years or for the rest of life. I had an elderly woman under my care some years ago who was admitted into hospital several times for this complaint, and each time she was freed from the eruption, but when treatment was discontinued the disease recurred. She afterwards died from bronchitis; but I learned from her medical attendant that she was seldom free from the eruption till her death. Many cases, however, completely recover and have no recurrence.

DIAGNOSIS OF PEMPHIGUS.

The diagnosis of a well-marked case of pemphigus is not difficult if it is kept under observation for a short time. There is no other disease in which the eruption actually consists of bullæ which are not produced by any traumatic cause, provided it is unconnected with syphilis. But all cases are not so typical and perfectly well-marked and it may be difficult to distinguish from true pemphigus cases belonging to—(1) bullous syphilide, sometimes called "pemphigus syphiliticus"; (2) bullous erythema, or severe forms of "herpes iris"; (3) cases of a mixed eruption, consisting of erythematous patches, papules and groups of herpetic vesicles—the dermatitis herpetiformis of Dühring; or (4) a congenital traumatic bullous disease, which may be called "traumatic pemphigus," or dermatolysis hereditaria bullosa of some writers.

1. *Diagnosis from Bullous Syphilide or so-called "Syphilitic Pemphigus."*

A bullous syphilitic eruption resembling syphilis in an adult is an extremely rare disease. I have myself never seen such a case, but am able to quote one from the practice of my friend Mr. Clutton at St. Thomas's Hospital.

The patient, a single woman twenty-one years of age, was suffering from an undoubtedly syphilitic affection of the throat and soft palate; she denied having suffered from any venereal disease. About a week before coming under observation an eruption appeared on her face in the form of "blisters which soon burst." It then attacked the arms and spread over the forearms, but it did not attack the wrists and hands. Her face and the arms above the elbow were covered with the remains of the eruption in the form of stains, scabs and superficial excoriations. Both forearms exhibited the eruption at its height and presented numerous bullæ, some being of considerable size and others very small. The patient

stated that all the marks on her face and upper arms had been preceded by these bullæ. She had never had anything of the sort before or, indeed, an eruption of any kind. She rapidly improved under antisyphilitic treatment and in three weeks nothing was left but stains to indicate the position of the eruption. She was kept under observation for six weeks, at the end of which time the throat was quite well, and there was no recurrence of the eruption.

Mr. Clutton remarks that there was no difficulty in the diagnosis, as the throat was quite characteristic of syphilis. There were no constitutional symptoms, such as are usually met with in acute pemphigus. The eruption speedily disappeared under mercurial treatment, and did not recur; moreover, the bullæ were too large for bullous hydroa, and were not surrounded by erythematous areolæ, whilst there was no pain or inflammation about the joints. Mr. Clutton cautiously adds that "the case might, however, have been a very mild attack of acute pemphigus, independent of syphilis";[3] and if the patient had not had a syphilitic sore throat he presumes that it would have been so considered. It may be concluded, I think, that there is a form of bullous syphilide which is only to be distinguished from pemphigus by the accompanying symptoms or, possibly, by the history. In general, however, syphilitic symptoms are mixed, and if part of such an eruption is bullous or like pemphigus other parts of the skin will show some other form of syphilitic eruption which will suffice to make the distinction. The infantile or congenital form of bullous syphilide, or so-called "syphilitic pemphigus," is much commoner, and it generally presents no difficulty in diagnosis. The bullæ are large and distinctive; they are often to be seen on the palms and soles, the colour is often dusky red, and in my experience some other form of syphilide—erythematous, papular or scaly—will be found on some part of the body. It differs from other congenital syphilitic lesions in coming out soon after or even in being present at the time of birth without the usual period of latency, and evidently represents a very grave form of syphilitic disease, as it is almost always fatal. It is alleged by some and denied by others that there is a second form of pemphigus neonatorum which is not syphilitic. I have never seen such a case and am disposed to think that it is extremely rare, if not entirely unknown, in this country; nevertheless, the descriptions of French and German writers seem to show that there is such an affection, which appears sometimes to prevail epidemically or to be endemic in certain places. It has been thought to be contagious. Some writers have connected it with a pyæmic process and others have found in some cases a fungus with distinct mycelium, which they regard as being the cause of the disease. It would appear to resemble the pemphigus foliaceus more than the ordinary form of the disease and is described by Professor Kaposi as exfoliative dermatitis of new-born children. These characters seem to delineate a form of disease with which medical men in this country are not familiar. The facts of endemic distribution and occasional epidemic occurrence seem to point to some specific infective cause, perhaps of septic origin, which exists in some places and not in others. I may mention that another form of specific infective disease in new-born infants—the so-called "trismus" or "tetanus neonatorum"—is only to be found in certain countries and that it is quite unknown in England. Without therefore calling in question the reality of this form of disease as observed in Germany or elsewhere, I do not think that it is necessary to take it into account as a difficulty of diagnosis. So far as the experience of medical practitioners in this country is concerned, a bullous or pemphigoid eruption in new-born children is always of syphilitic origin and is easily distinguished from pemphigus.

2. Diagnosis of Pemphigus from Bullous Erythema.

Erythema multiforme may not unfrequently, as I pointed out in a previous lecture, show bullæ, which are developed on the erythematous patches. The exudation may also take the form of large vesicles rather than that of bullæ, being often arranged in a ringed form, constituting what is called "herpes iris," which is only a further development or severer form of erythema iris. These eruptions are distinguished from pemphigus by their rapid onset, sometimes coming out in a single day, by their remarkable symmetry on the two halves of the body, by specially affecting certain regions—viz., the backs of the hands and forearms and the face—and in almost all cases by their acute course, lasting only for one, two, or possibly, for three weeks. It is true, as I remarked in a previous lecture, that there are cases of chronic or persistent (not merely recurrent) erythema, but such forms are, in my experience, unlike pemphigus, being generally marked either by desquamation only, in addition to redness, or by small vesicles, not bullæ. There are, however, certain cases called "bullous erythema" by some authorities, which pass into the form of disease I am now going to speak of, being also called "hydroa" or "dermatitis herpetiformis."

3. Diagnosis of Pemphigus from Dermatitis Herpetiformis or Bullous Hydroa.

The difficulty of this distinction lies in the fact that the cases to which Dr. Dühring first gave the name, and which had been previously known as hydroa or sometimes as herpes, have been called "pemphigus" and are still so regarded by some authorities such as Professor Kaposi of Vienna, whilst others, as Dr. Pye-Smith, classify them as bullous erythema. The characters of this disease, as defined by Dühring, whose definition is accepted by Brocq and other dermatologists of the French school, as well as by many in this country and Germany, are as follows: 1. The polymorphous character of the eruption, which may consist of erythematous patches, papules, vesicles of various sizes, pustules and bullæ. In successive crops of the eruption one or other of these may predominate or even be the sole lesion present. 2. Subjective nervous symptoms, either itching, more or less intense in character, or actual pain, which may be severe. These symptoms may be complained of even in the intervals of the eruption. 3. Long duration of the affection, which may recur in successive crops for some months or even, according to Dr. Dühring, for years. 4. Generally speaking, there is no great disturbance of the general health and there is also an absence of the severe constitutional symptoms of pemphigus. Of these characters the first and second are by far the most important. The third can hardly be held to be constant, since in one form of this disease—that associated with pregnancy, hydroa or herpes gestationis—the affection is sometimes essentially transitory and may never recur. The fourth character is of merely relative importance and only serves to distinguish the disease from severe forms of pemphigus. The question is whether these characters constitute a definite disease distinct from pemphigus. This subject is much too large for discussion now. I would only remark that the first two characters clearly delineate what was called by Willan, by Hebra and by some of the latter's followers "pemphigus pruriginosus," and that many cases were described under that or a similar term before Dr. Dühring wrote. Amongst the cases related above I have purposely introduced one (Case 7) which would now be called by Dr. Dühring's name, but which Professor Kaposi, for instance, would undoubtedly call pemphigus.[4] As I formerly pointed out, the general course of the disease was indistinguishable from that of pemphigus. For my own part I think there is a real convenience in giving to this malady, as Dr, Dühring has done, a distinct name; it is so remote from ordinary forms of erythema that the latter name is not conveniently applied to it. Perhaps it would be more logical, if we accept Dr. Dühring's definition, to make common pemphigus one of its varieties, but so great a revolution in nomenclature would be hardly acceptable. My present point is one of diagnosis and it need only be said that a disease with the characters given above is that which has received so many names. Cases of bullous eruption in pregnancy should always be thus classified; and another point which is decisive when recognised is that the vesicles if present are generally arranged in groups like herpes.

4. Diagnosis from Congenital Traumatic Bullous Disease.

There is a peculiar and very rare bullous disease which is liable to be confounded with pemphigus, but which is really very different. It has the following characters: (1) bullæ varying in size are produced on various parts of the body by friction or any injury, but not otherwise; (2) the bullæ are often hæmorrhagic; (3) the nails are often affected by similar injuries, becoming deformed or even quite destroyed; (4) there is no disturbance of the general health; (5) the affection is congenital, or at least dates from infancy, and sometimes occurs in several members of the same family; and

[3] St. Thomas's Hospital Reports, vol. x, p. 60.

[4] At the Paris Congress of Dermatology in 1889 a case was shown which Dr. Dühring and Professor Brocq declared to be a typical one of dermatitis herpetiformis, but which was regarded by Professor Kaposi as being unquestionably pemphigus. See the French translation of Professor Kaposi's lectures by Besnier and Doyon, "Maladies de la Peau," the second French edition (Paris, 1891), vol. i. p. 839, where there is a very full discussion of this question.

(6) it is quite unaffected by drugs or other treatment, though its severity seems to depend partly upon the state of the general health. I have seen three cases of this affection.[5] This curious affection undoubtedly depends upon an abnormal vulnerability of the skin which is congenital and is therefore hardly a disease. It is, however, remarkably like pemphigus when the bullæ are numerous. It appears to persist during life. My first case has been at various times under the observation of my friend Dr. Cavafy, who tells me that the condition of the patient, now a young man, is unchanged. It is remarkable that in all the German cases great stress is laid upon the hereditary character of the affection; but in none of my cases could I find any history of its occurrence in other members of the family, either in the previous or contemporary generation. Dr. Wickham Legg's two cases occurred in the same family, but no hereditary transmission is mentioned. The best name I think would be "traumatic bullous dermatitis," but I only refer to the matter here for the purpose of diagnosis. The characters given above are sufficient for its recognition, and will save the vain labour of trying to cure the affection.

TREATMENT OF PEMPHIGUS.

On this subject there is the most remarkable divergence in the statements of different writers. Hebra and some of the French dermatologists speak with something like despair, as if all treatment were futile, or at the best palliative. Mr. Hutchinson, on the other hand, speaks of arsenic as an almost unfailing remedy. The experience, I think, of most English dermatologists agrees in the main with that of Mr. Hutchinson. I certainly share it, but there are more qualifications which ought to be borne in mind. In children or young persons pemphigus, I think, rarely fails to disappear under the use of sufficient doses of liquor arsenicalis. The only exceptions I have seen have been in cases of doubtful diagnosis, and the only possible fallacy appears to be that in a relapsing or recurrent disease there are sometimes spontaneous recoveries. This would, however, only explain a portion of the cases. After middle life the remedy certainly loses some of its efficacy, and in aged people, seventy years old or upwards, it seems to have very little effect. Perhaps it will be thought that this is true of other drugs and of other diseases and that cures are generally easier in the young than in the old. However, in Cases 1 and 3 arsenic did not prevent the disease from assuming a formidable shape, being fatal in one case and nearly so in the other. The acute febrile stage at any time of life is also less influenced by arsenic than is the chronic stage. In ordinary cases treatment is commenced with five minims of the arsenical solution (or less in children) three times a day, and this amount is increased to ten or fifteen minims if it is found to be necessary. A rapid effect may be produced or the administration of the drug may be continued for two or three months. In senile and acute cases (as in Cases 1 and 3) I should rely more on quinine, full doses of stimulants, careful dieting and, in general, everything that tends to keep the patient alive. There is no other drug much used internally, but perchloride of iron has been strongly recommended in chronic cases and opium in acute ones. The local treatment of pemphigus cannot be regarded as being curative, because nothing will prevent the coming out of fresh bullæ. The first indication is to protect the excoriated surfaces and to relieve the painful tenderness, which is often the patient's chief trouble. This indication is met by such applications as zinc ointment or—what is sometimes better—the zinc gelatine of Pick. In either case I always add a small quantity of carbolic acid (from five to ten minims to the ounce). Absorption may take place if more is used; though even that would probably do no harm. Any non-poisonous antiseptic may be used; and thus the second indication for treatment is met—namely, to prevent decomposition in the discharges of serum &c., which may in neglected cases become very offensive. It is also a good plan to sponge the skin generally with a weak coal-tar lotion: one drachm of liquor carbonis and half an ounce of glycerine, water to one pint. Baths have not been found to be comforting in most of the cases I have seen, but I have no experience of cases so severe as to require the continuous bath recommended by Hebra. The patient must, if possible, lie upon a water bed, and the proper dressing of a severe case will, I may say, test the capabilities of the nurse. After recovery from an acute attack, not only the conventional change of air is desirable, but more especially rest and quiet, since, whatever may be the cause of pemphigus, there can be but little doubt that excitement, anxiety and nervous strain tend to aggravate the condition.

[5] The first I described (under the name of pemphigus) in the St. Thomas's Hospital Reports, vol. xii., p. 187, 1882 and the others in the same Reports for 1884, vol. xiv., p. 225, and 1886, vol. xvi., p. 261, as "traumatic bullous affection resembling pemphigus" or "congenital traumatic pemphigus." Two similar cases were described simultaneously with my first by Dr. Wickham Legg in the St. Bartholomew's Hospital Reports, vol. xix., 1882. At that time I knew of no other recorded cases; but in 1882 Goldscheider reported (Monatschefte für Dermatologie, vol. i., p. 163, 1882) a case in which bullæ were produced by friction as "hereditary tendency to formation of bullæ," and Koebner described in 1886 (Deutsche Medicinische Wochenschrift, No. 21) a case similar to Goldscheider's one as "epidermatolysis bullosa hereditaria." Since then numerous similar cases have been published in German periodicals and have always been described as "hereditary."

A Clinical Lecture

ON THE

TREATMENT OF CHRONIC SUPPURATION OF THE MIDDLE EAR.

Delivered in Vienna on June 28th, 1893.

BY PROFESSOR ADAM POLITZER.

(*Reported by* ST. CLAIR THOMSON, M.D., M.R.C.P. Lond.)

THE treatment of chronic suppuration of the middle ear is first of all determined by the local changes in the auditory apparatus. It will vary accordingly as we find the discharge associated only with swelling of the mucous membrane or with granulations, polypi or cholesteatomata. Remedial measures will depend on the quality and quantity of the secretion, the situation and size of the perforation in the membrane, the local changes consequent on the suppuration, and on the previous state of health of the general organism. Assisted by the determination of these points we direct our treatment so as to bring about a cessation of the discharge and a removal of inflammatory products in the middle ear. One of the chief conditions for the healing of a chronic otorrhœa is the thorough removal of secretion from the tympanum. This is of great importance, because the pus lodges in the irregular loculi of the middle ear and from the ready admission of air it exposes the patient to sepsis, with consequent ulceration of the mucous membrane, bones &c. In beginning the treatment of a chronic discharge from the tympanum it is advisable to examine the quality of the discharge. A pledget of absorbent cotton wool, if introduced as far as the perforated drum, will bring away some pus which may be examined microscopically for the different micro-organisms. Of these the streptococcus gives the worst prognosis. If the pus has a very bad odour we can judge from that as to the intensity of the decomposition. The next step in examination and treatment is to remove as much as possible of the septic discharge lying in the loculi of the tympanic cavity. We do this by inflation through the Eustachian tube so as to drive the contents of the tympanum into the meatus externus. Should air fail to pass through the Eustachian tube the catheter can be used, and if necessary the contents of the tympanum may be aspirated with Siegle's instrument. The ear is now syringed with an antiseptic liquid, which may vary in strength according to the degree of fetor of the discharge. The lotion generally employed in my clinic is one made by adding from ten to fifteen drops of lysol to a quarter of a litre of boiled water; but we can also use carbolic lotion (2 per cent.), resorcin (from 1 to 2 per cent.), or salol (1 per cent.) If a still stronger antiseptic is required we use corrosive sublimate in the proportion of 1 in 2000 The following points must be carefully borne in mind with regard to the employment of this medicament: (1) never to use it in the case of children, (2) or when the Eustachian tube is very patent, as it might then run into the pharynx and be unconsciously swallowed in small, but frequently repeated doses; and (3) discontinue its use at the end of a week, or sooner if all smell has disappeared. If required, it can be resumed after a few days' intermission. We next dry the ear thoroughly and continue the steps of our antiseptic treatment. If there are no granulations on the perforated membrane or inner wall of the tympanum I

generally insufflate finely powdered boracic acid. Any superabundant powder can be got rid of by a puff of air from the bag into the meatus. I have never seen any bad results due to caking of the boracic acid, but it is well in any case not to leave more than a fine coating. This plan of dressing is repeated according to the quantity of discharge; but generally once a day is sufficient. A plug of cotton wool may be worn in the ears when the patient is out of doors. As soon as we find the boracic acid remains dry the ear is not interfered with for fourteen days, and then if necessary the same plan of treatment is recommenced. If boracic acid is used without success iodoform is employed, its disagreeable odour being disguised with Tonga bean. An objection to iodoform, especially in private practice, is that some of the powder may easily fall on the clothes and be disagreeable on account of its smell. This can be avoided by having small bougies made of iodoform with gum Arabic, glycerine and tincture of Tonga. These are about as thick as an Eustachian catheter; a small piece—about a quarter of an inch—is broken off, introduced as far as the drum with the forceps and kept in place with a plug of cotton wool. It will not obstruct the flow of pus and will maintain a supply of antiseptic material as its surface mixes and melts in the discharge. Instead of iodoform iodol is sometimes used, which has the advantage of being free from smell. Alcohol can also be used for dropping into the ear either in a pure state or mixed with salol, iodol, resorcin or boracic acid, all in the proportion of 1 in 20. Lotions of salicylic acid may be used of the strength of 1 in 1000. Hydrogen peroxide has been much used by our American *confreres*. It forms bubbles of gas in the depths of the tympanum, and thus it is useful in bringing out the secretion from deep parts, but it is otherwise of little value.

Even when a perforation does not close suppuration may completely cease and may remain absent for months or years. It generally ceases in summer, and when it returns it is more apt to do so in autumn or winter. The recurrence is generally due to naso-pharyngeal catarrh from cold, damp, fog &c., or to the entrance of water into the ear when bathing or washing. Certain prophylactic directions should be given to all patients who have had an otorrhœa and who are left with an incomplete membrane. They should never carry cotton wool in their ears when indoors or when it is fine out of doors, but the affected organ should be protected with a light pledget when going out in windy or cold weather. No water should be allowed to enter the meatus; even in health it is quite unnecessary for purposes of cleanliness and only tends to the accumulation of cerumen. In bathing the ear must first be blocked with cotton wool impregnated with vaseline, and sea bathers should also wear a mackintosh cap to cover the ears and to protect them from the waves. The patient should not, as swimmers are apt to do, take water into the mouth and blow it out through the nostrils.

When a relapse occurs in a quiescent case of chronic middle-ear suppuration we should give a guarded prognosis at first, for this recurrence may be due to ulceration or caries, or some new development which remains obscure until the discharge is controlled. Suppuration may cease with complete cicatrisation of the perforated drum-head. Less favourable naturally, are those cases where the perforation persists. In a number of the latter cases the mucous membrane of the tympanum remains almost normal; in others the cavity becomes lined with epithelium, which grows inwards from the external meatus over the margins of the perforation. This exposes the patient to the risk of the formation of cholesteatomata and, as I have previously explained, when these form in the tympanum they may be the origin of very dangerous symptoms. In fact, every patient with a deficient membrana tympani should present himself for observation from every three to six months. One cannot prevent the epithelium of the external meatus from growing through the perforation into the tympanum and so conducing to the formation of these masses. The best treatment for the prevention of cholesteatoma is the use of pure alcohol from time to time and syringing out at once any newly formed epithelial masses with an antiseptic lotion. I generally use the very purest spirit of wine to which boracic acid has been added in the proportion of 5 per cent. A teaspoon having been warmed by immersion in hot water twenty drops of boracic alcohol are placed in it and are then poured into the ear and left there for half an hour. Sometimes the alcohol causes considerable smarting and pain; we relieve this at once by blowing air into the ear from the bag or from the mouth if no bag is at hand. If, however, the masses of cholesteatomata have already formed we must soften them by using glycerine and bicarbonate of soda and then wash them out. Cases which do not yield to this antiseptic treatment require the employment of astringents; the one chiefly used is nitrate of silver. The indications are extensive destruction of the drum-head, with swelling and thickening of the tympanic mucous membrane; this latter point can be tested with a probe. We first syringe out the ear with an antiseptic solution; we then take a 10 per cent. solution of nitrate of silver and from a warmed glass spoon pour in from ten to twenty drops, leaving them in the ear for from ten to fifteen minutes. If pain results we leave the lotion in the ear for a shorter period and immediately syringe it out with pure tepid water. A solution of common salt has been recommended in order to neutralise the nitrate, but I am strongly opposed to this, as the resulting clots of chloride of silver form insoluble deposits and act like foreign bodies within the tympanum. This treatment leaves a white coating on the exposed mucous membrane and we therefore wait for one or two days until this clears off and then we repeat the process. Four or five applications are generally enough, and sometimes it is advantageous to return to the boracic powder treatment or to alternate the two methods. I again insist on the point that this treatment is contraindicated in small perforations. Formerly astringents, such as the salts of zinc, lead, copper &c., were much used, but their employment has been discontinued, as they all form insoluble albuminates which cannot be brought away. The only one still used is "aluminia acetica," either pure or mixed with water in the proportion of 50 per cent. In all these methods it is well to vary the treatment, as the mucous membrane becomes habituated to any one remedy; thus, for instance, it sometimes answers to use the boracic acid treatment for several days and then to alternate the iodoform for the same period. If there are any granulations in the tympanic cavity or on the remains of the membrane they should be cocainised and touched with liquor ferri perchloridi, or they may be treated by the use of alcohol, of which half a teaspoonful is poured into the ear and left there for a quarter of an hour. Sometimes a quicker result may be obtained by combining these two methods—touching the granulations one day and using alcohol the next. Larger granulations can be curetted.

In certain cases the suppuration in the tympanum is maintained by a stricture in the external meatus. This is often bony and cannot be relieved; our efforts must then be more strenuously directed to clearing and disinfecting the cavity behind the stricture so as to prevent sepsis and its dangerous consequences. This may be done by the use of a fine elastic tube attached to the syringe and passed within the constricted part of the meatus; or the tympanum may be washed out through the catheter inserted into the Eustachian tube. If we find that the lotion does not pass freely through the cavity and out through the meatus externus we employ a fine elastic tube (*Paukenröhrchen*), which is passed right through the Eustachian catheter and up into the tympanum. In this way the cavity can be thoroughly syringed out—as will be seen by the turbid fluid issuing through the constricted meatus externus. The soft, threadlike tube which I use for passing through the Eustachian catheter into the tympanum is one that was designed by Weber Liel. He employed it for removing mucus from the tympanum by suction through the Eustachian tube in cases of simple middle-ear catarrh without perforation. This use for it has been quite abandoned, but it is very useful in the plan of treatment that I have described for middle-ear suppuration. In this way I have sometimes cured in four days a discharge that had persisted for two years. The fluids employed are sterilised water, 1 per cent. salt and water, or 1 to 2 per cent. boracic or resorcin lotion. In cases of perforation through Shrapnell's membrane from suppuration in the external attic or cavity of Prussak the finely pointed rubber or metal cannula invented by Hartmann is used or the pliable ones I have proposed. After syringing with an antiseptic the cavity is dried by blowing in air through the same cannula and if required the insufflator of the same form for throwing in a very fine layer of boracic acid can be employed.

Aspiration of pus through the Eustachian tube is of no value, because under the diminished pressure the walls fall together and prevent the exit of any material; but this method is most useful when directed through the meatus externus, as we can draw pus from parts where neither inflation nor syringing could dislodge it. We should always do it

in cases where the air douche drives out some pus, and yet on inspection it can be seen that more matter remains behind. In aspirating (with Siegle's instrument) we should look to see from what point the pus comes. The value of this method is shown when we apply it to a dissected part, where a full view of its action is attainable. We then see that it will draw fluid even from the recesses of the mastoid antrum. Its value is more marked in cases where the cavity of the tympanum is divided into loculi by bands of inflammatory formation, when inflation and syringing would fail to dislodge the matter.

It is impossible to describe the exact method of action of the remedies employed. We only know that many remedies—especially alcohol and powders—withdraw water from diseased tissues, and that others have a caustic action and set up strong reaction and speedy alteration in the circulation and nourishment of the mucous membrane; further, that the chemical and mechanical irritation caused by certain agents sets up a disintegration and reabsorption of round-celled infiltration; and, finally, that the antiseptic treatment prevents putridity and decomposition and exercises a good influence (through its germicidal property) on the progress of the suppurative process. In conclusion, I must touch on the operative treatment which may be required. If the perforation is very small it may be necessary to enlarge it. When two small perforations exist it may be advisable to unite them into one. The extraction of the ossicles, in my opinion, should only be performed when they are carious or when the membrane is destroyed and they are of no more use. After cessation of discharge operations may be required for the consequent adhesions—a subject which cannot be included in the present lecture.

TWO CASES OF GASTRO-JEJUNOSTOMY.

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THE first case was that of a patient sent to me from the country in December of last year. He was a tall and well-built, but exceedingly emaciated, young man, twenty years of age. His illness had commenced very gradually about three years previously with symptoms of chronic gastritis. For many months past he had been unable to take solid food and had suffered much from sickness. Of late he had obtained some relief by having his stomach washed out, four or five pints of fluid—more than he had taken in the preceding twenty-four hours—being frequently removed. On examination the abdomen was found to be exceedingly thin and the stomach evidently dilated. Nothing of the nature of a tumour could be detected. As might be expected, the bowels were described as constipated and very little urine was passed. In other respects the patient appeared to be healthy, although there was a suspicion of dulness about the left apex. Dr. Gilbart Smith, who saw the patient in consultation with me, agreed that there could be no doubt as to the existence of pyloric obstruction. From the patient's age, the length of time the symptoms had lasted and the absence of any evidence of tumour, it could not be of a malignant character; but, with the exception of a vague history of peritonitis when the patient was three years old, there was nothing to suggest a cause. The condition was explained to the patient and he returned home. For a month or two there was some improvement, and then his weight, although he was already exceedingly thin, began to fall away so rapidly that sixteen pounds were lost in the course of seven weeks. The pulse-rate when he lay down was only 56; the least exertion, even that of standing up, made it rise from 25 to 30 beats in the minute and the temperature was persistently below normal. For a week an attempt was made to increase the reserve of strength by feeding him with nutrient enemata, but this proved of no avail and early in March operation was determined upon without further delay. The night before and the morning of the operation the stomach was thoroughly washed out with boracic acid lotion, the contents being peculiarly offensive. On opening the abdomen a moderate degree of dilatation was found, the pylorus was thickened and hard, but there was no tumour or adhesion, or anything so far as the serous surface was concerned that could explain the obstruction. Pyloroplasty, which had been contemplated being negatived by the thickening of the pylorus, it was determined to perform gastro-jejunostomy with Senn's plates. The omentum and the small intestine were turned over to the right and the commencement of the jejunum was found at once. An opening was made in the stomach on its anterior surface at the pyloric end and one of the plates was inserted. The same thing was then done on the convexity of the loop of the jejunum a sufficient distance down to give full play to the intestine as it wound under the transverse colon; the two surfaces approximated and the ligatures were tied. A few points of Lembert's suture were placed around the margin as a precaution and to ensure a sufficiently wide surface of apposition and the abdominal wound was made secure. Owing to the extreme emaciation and the peculiar hardness and inelasticity of the tissues considerable difficulty was experienced in bringing the edges of the peritoneum together and a double set of sutures was required. The shock was very severe; the temperature remained below 97° F. for many hours; the water that was injected on two occasions to wash out the bowel was retained and absorbed, and only a few ounces of highly coloured turbid urine were secreted in the first two days. Nutrient enemata were given every four hours and feeding by the mouth with small quantities of peptonised milk was commenced the day after the operation. There was a constant feeling of sickness, and the patient vomited several times, a certain amount of altered blood being present at first; bile was noticed on the third day. After this the patient gradually rallied, and though there was a great deal of retching caused to a large extent by the collection of tenacious phlegm in the pharynx, and occasional vomiting of bile-stained fluid, his strength improved so that he was able to sit up in bed. The diet consisted chiefly of peptonised milk with essence of beef and farinaceous food, brandy and champagne. Small quantities of custard and fish were taken without discomfort and dark-coloured formed motions were passed naturally. The wound was dressed at the end of a week; the deep part had healed soundly, but the skin had retracted a good deal on either side. The temperature, which had risen once to 100° F. on the third day after the operation, fell to normal and everything appeared to be progressing satisfactorily. A fortnight after the operation the regurgitation from the intestine began to be troublesome, the patient being sick two or three times a day and bringing up large quantities of nearly pure bile. The amount of food taken and digested continued ample; but it soon became apparent that no real ground was being gained. Nothing seemed to do the patient any good and, if possible, he became thinner than he had been previously. Wandering delirium at night was noted at the end of the fourth week; the urine and then the motions were passed unconsciously and the patient gradually sank and died six weeks after the operation. The wound had quite healed; for the last ten days there was no sickness and the motions were deeply coloured with bile. A few days before death there was some diarrhœa, which was checked at once by starch and opium injections; but up to the very day before death liquid food was taken well and in sufficient quantity and apparently was digested. The temperature after the operation continued normal until the last three days, when it rose in the evening to 101°, 102° and 103° respectively, falling again to normal in the morning. At the time of death itself it ran up rapidly to 106·2°. At the post-mortem examination the abdominal wound was found to be sound, a loop of small intestine being adherent to its posterior surface. There was no peritonitis; the jejunum, about fourteen inches from its commencement, was firmly adherent to the stomach three inches from the pylorus. On opening the stomach the pylorus was found to be reduced to the size of a pinhole; the thickening which had been noted at the operation had almost disappeared and therefore was probably muscular in origin, and there was no scar in the stomach or duodenum to account for the contraction. The artificial opening was soundly healed and admitted the tip of the little finger easily. By it, lying in two small sinuses, were the silk threads that had been passed through the coats of the viscera hanging free. No trace of the plates was to be found anywhere. The stomach contained a small quantity of liquid; the large intestines contained some semi-solid fæces, and there was a small amount of bile in the gall bladder. The other viscera were exceedingly dry and bloodless but otherwise healthy.

The second case was that of a woman thirty-five years of

age who was admitted into the London Hospital under the care of Dr. Sansom suffering from carcinoma of the pylorus. The patient was of fair height, and according to her own account had weighed 11 st.; her present weight was 4 st. 6 lbs. Her illness had commenced nine months before with pain across the abdomen and in the back. Frequent vomiting then set in; the loss of flesh became exceedingly rapid, and a hard mass made its appearance in the abdomen to the right of the middle line and just above the umbilicus. On examination this mass did not appear to be fixed by adhesions. The stomach was much dilated, extending into the left iliac region; the other organs appeared to be healthy. There was no doubt as to the diagnosis. The operation was performed on May 8th, the same steps being taken as in the former case, but Mayo Robson's bone bobbin was used instead of Senn's plates, and everything was completed in forty minutes. The shock was not so severe as in the former case. Nutrient enemata were given every four hours and the following morning she was fed with small quantities of peptonised milk and whisky by the mouth. The temperature on the day after the operation rose to normal, and then steadily sank lower and lower until the sixth day, when it barely reached 96°, and death ensued from exhaustion. At the post-mortem examination the abdominal wound was found to be sound and the jejunum firmly adherent to the anterior wall of the stomach. On laying the latter open the bobbin was found to be loose inside, slightly softened and with its edges somewhat rounded off. The opening was of very fair size, admitting the forefinger readily, and the mucous edges were adherent round the margin.

Gastro-jejunostomy has now been performed a considerable number of times, but there are still certain points in connexion with it which cannot be regarded as definitely settled. There can be no question as to the part of the jejunum which should be selected or as to the way in which it should be found. As it has to come round from under the transverse colon, sufficient length must be allowed. The omentum is usually so wasted that it does not give rise to any difficulty. The position of the opening in the stomach is not quite so certain. In cases of malignant disease at the pylorus it should, of course, be as far off as possible, and where there is much dilatation, where the walls are thin and atrophied and the muscular power lost, it should be low down on the anterior surface, as the contents have to find their way out by gravity alone. But where the obstruction is not malignant and there is a chance of the stomach regaining its muscular power this position is open to question. In the first of these two cases the opening was purposely made as near the pylorus as it could be, so that it might lie in that part of the stomach which is believed to be shut off from the rest during digestion by the contraction of the circular muscular fibres; and certainly regurgitation of bile and vomiting ceased for some time before the patient's death, in spite of his weakness and irrespectively of the position in which he lay. Senn's operation takes considerably longer than that with Mr. Mayo Robson's bone bobbin, and the two sutures piercing the walls of the adjacent viscera are an objection; but they hold the parts together more securely and for a greater length of time, and they bring much larger surfaces into contact, so that there is less risk of the bowel dropping suddenly and bending at an acute angle. Still, although the bobbin had slipped out, it had remained sufficiently long to secure good union. Whether the opening will close again or not is a very important matter. Cases of four years' duration have, I believe, been recorded; but in the first of these two cases, though there was still ample space, there was already in the six weeks a considerable degree of contraction. The cause of death in the second of the two cases was undoubtedly exhaustion and starvation; that in the first case it is more difficult to understand. Nothing was found in any of the viscera post mortem to account for it and the clinical symptoms, especially the hyperpyrexia, pointed to the action of some toxic substance. The wound was perfectly sound and it is difficult to see where such a substance could have been generated except in connexion with the digestive organs. The power of assimilation seemed to have failed altogether. Abundance of food was taken and apparently digested, but the patient did not benefit in the least from it; and it is possible that, under the abnormal conditions present, products were formed by fermentation or decomposition in the alimentary canal which were absorbed and gave rise to the peculiar train of symptoms.

Wimpole-street, W

EXPERIMENTS AND CLINICAL OBSERVATIONS ON THE ACTION OF CHLOROFORM.

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THE result of fifty experiments recently performed on animals at the Veterinary College of Glasgow is believed to prove that when chloroform is inhaled there is an action exerted by the vapour on the respiratory tract, and that a reaction ensues when the inhalation is discontinued; whilst it is maintained that both experiment and clinical observation combine to show that this reaction is the cause of primary syncope when allowed to take place at certain stages of the inhalation. A most important question therefore is—how long does the vapour take to escape from the lungs when the inhalation is discontinued? Dr. Snow concluded from the odour of the breath and from an observation on a man who inhaled the smoke of a cigar that the vapour was completely discharged from the lungs with three expirations, and my own observations on patients, and on a rabbit, cat and dog confirm this and seem to show that the lungs must be emptied in from ten to twenty seconds. The time taken to charge the lungs may be passed over, as well as the probable effects which are produced by the action of the vapour, for the reaction which follows is the most important question to be considered and constitutes in itself an irrefragable proof of the action that had taken place previously. It must here be mentioned that rabbits, cats and small dogs were chloroformed in a large glass vessel with a close-fitting lid, of a capacity of 4500 cubic inches and which had been previously charged with a given percentage of vapour. When observations were made on the heart the action was previously determined by auscultation, a binaural stethoscope being used in all but a few early experiments. An experiment on a rabbit and another on a guinea-pig seemed to show that no reaction of any importance with respect to the heart's action occurred in these animals. No observations on the pupils were made in these cases, but I think it may be claimed for those which were made on the pupils of the cat that they led to results of the most beautiful and decisive character. When a cat's pupil is dilated it is circular, as it contracts it becomes oval, and it finally, in the strongest contraction, appears as a mere line. The yellow iris so common in cats renders pupillary changes easy of observation. In one experiment a cat inhaled 4 per cent. of chloroform for two minutes. When taken out of the jar the pupil was widely dilated and it contracted to a minimum in fifteen seconds; this lasted for forty-five seconds, when there was sudden and wide dilatation and the cat recovered. In two other experiments the contraction took place in ten seconds, and the sudden dilatation occurred a minute afterwards. Similar results ensued in two cats that breathed 4 per cent. of chloroform for one minute. This contraction cannot depend on further absorption, for so long as the cat remains in the vapour the pupil remains dilated; and it is equally clear that it must be due to a sudden reaction, otherwise the pupil would gradually return to its normal condition. In deeper anæsthesia these results were considerably modified, but they may be meanwhile omitted.

It now remains to show that the vapour reaction leads to stoppages and great irregularities in the action of the heart in cats. A considerable number of experiments were performed to determine this, but it will only be necessary to instance a few. In four experiments four cats inhaled 4 per cent. of chloroform for one minute. In one instance the observation was a failure owing to the resistance of the animal, and in another the cardiac rate, which had been 140 before the inhalation, was extremely rapid when the cat was taken out of the jar; but there was a sudden stoppage in half a minute, which lasted for about five seconds, and this was followed by extreme irregularity for a minute and a half, when the cat recovered. There were pauses between individual beats in this case; sometimes after every third beat, whilst the sounds were very weak during this irregular action, and the same may be said of other cases. In the other two experiments the results were similar, rapid but regular action of the heart ending in sudden stoppage and irregularities in about half a minute. In two other experiments, in which

two cats inhaled the same percentage for two minutes, there was not much difference in the results. In eight experiments the several cats breathed 3½ per cent. of chloroform for two minutes, and subsequent stoppages and irregularities occurred in five of these. In one the heart was irregular when the animal was taken out of the jar, but stoppages did not occur till some time afterwards. In another, the cardiac rate, which had been regular and quick when the animal was taken out of the jar, became extremely irregular with frequent stoppages in half a minute, and this condition lasted for no less than four minutes and was associated with convulsive movements of the muscles of the thorax, the irregularities of the heart being more marked when the latter occurred. This is important to notice, as the concurrence of these two phenomena, though rare in cats, is common in dogs, and probably also in the human subject. Two days after the eight preceding experiments were made, the five cats that had shown irregular action of heart being caused to inhale the same percentage of chloroform (3½ per cent.) for a longer time — for four, five, six, seven, and eight minutes respectively. More or less irregular cardiac action occurred during recovery in all, and in two it was marked and prolonged; but it was observed that the irregularities were longer in manifesting themselves. In one, for instance, the cardiac rate had been 180 before inhalation and very regular, but after inhalation of chloroform for five minutes it was found to be 140 and regular; it suddenly rose about the beginning of the second minute after the administration was suspended to over 200; at the end of the second minute irregularities began, with changes in the "lub-dupp" difficult to describe, and continued for eight minutes; and it was ten minutes from the commencement before the cat recovered. In the next case, in which another cat remained in the same percentage for six minutes, slight irregularities occurred in two minutes after cessation of the inhalation, but the cardiac action became regular in three minutes after removal from the vapour, and the animal recovered completely in less than five minutes altogether. In the last of the five experiments, in which a cat inhaled 3½ per cent. of chloroform for eight minutes, the cardiac rate was distinct and fast (240) for four minutes after, but it then suddenly became slow and irregular, and this continued for two minutes, when the cat recovered, and the heart was found to be quite regular (160).

These results showed that very deep anæsthesia in the cat did not always modify reactionary effects on the heart, but the fact that the stoppages were longer in occurring after deep anæsthesia proved that the latter were not due to absorption of the chloroform and that they could only be accounted for by the vapour reaction. The cardiac rate was often 240 during the reaction and the irregularities were coincident with a very sudden slowing. The binaural stethoscope permitted auscultation with very little pressure on the chest wall. In a few experiments (with a long stethoscope) the cardiac action and the state of the pupils were observed at the same time, and it was found that contraction of the pupils was coincident with rapid action of the heart, and that dilatation corresponded with slowing and irregularity. It will have been observed that when the irregular heart's action was of short duration the cat recovered in less time than it had been exposed to the vapour of chloroform, but that if the irregularity lasted longer it was quite otherwise—facts which are of great importance. The irregular action commences when the last drop of chloroform has left the blood, but as long as it continues the animal is as passive as if under the influence of a profound dose of the agent.

Forty experiments having been thus far performed in the inquiry, there remained only ten to be done on dogs. A very pronounced struggling stage takes place in the latter, this being almost entirely absent in cats. When this was at its worst auscultation was found to be impossible, and it was often aggravated after the administration of the chloroform had ceased; but the observations which were made when the struggling had somewhat subsided or even after it had passed off were sufficiently conclusive. These showed that the dog was liable to similar stoppages of the heart as the cat, and that they were almost invariably associated with spasms of the respiratory and other muscles. They further showed that deep anæsthesia modified or altogether prevented these effects on the heart, and this is a vital part of the inquiry. It was found, moreover, that immediately after the struggling stage and when the animal was quiescent the anæsthesia was nevertheless not deep enough to prevent irregular cardiac action. In an experiment which was made on a male terrier about 2 st. in weight the animal inhaled two drachms of chloroform from a warm, dry towel for one minute. For the first minute during recovery the action of the heart was very rapid, but owing to some struggling it could not be counted. The struggling then became so violent that the dog was released and it rolled on the floor for two minutes, moving its legs with great rapidity. On becoming comparatively quiet the heart's action was found to be feeble and very irregular, there being frequently pauses between every beat, whilst the beats were very weak. In another experiment on the same animal, which was made six days afterwards, the dog inhaled 4 per cent. of chloroform in the jar till complete anæsthesia was induced. Previously to this the action of the heart had been slightly irregular, the rate being from 116 to 120. All movements ceased in two minutes, and the dog was removed from exposure to the chloroform after one minute more, when it was found to be quite motionless and relaxed. The action of the heart was found to be regular and slow (88) for half a minute; but it rose regularly during the next half minute, and during the second minute it was 140, regular, full and strong, when the dog recovered. In another experiment a small dog, 14 lb. in weight, breathed 4 per cent. of chloroform in the jar till twenty-five seconds after the struggling had ceased, being quite flaccid when removed from the jar. Nevertheless the heart's action, which had been regular when the dog was removed, soon became extremely irregular and then rose to 240, subsequently slowing to 140, with marked irregularities lasting for fully a minute. When some days afterwards the same animal was kept in the vapour for one minute after it had become flaccid there was no irregular action of the heart during recovery. Four more experiments with other dogs gave similar results.

It is maintained that the stoppages and irregularities of the heart, as above described in experiments on cats and dogs, correspond with and explain the fall of blood pressure to zero which has been observed by some experimenters after the administration of the chloroform has been discontinued, and also the syncope or sudden failure of the pulse which has been so often noted clinically in the human subject. According to this view chloroform syncope is analogous to syncope from other causes. The sudden removal of pressure from a large bloodvessel—i.e., the cessation of a force previously acting—may cause syncope. When men have been subjected to a pressure of several atmospheres they cannot be brought back suddenly to the normal atmospheric pressure without incurring the danger of syncope, and this syncope may prove fatal. Further, it has been seen that chloroform syncope coincides with a sudden transition from a quick to a slow cardiac rate, and the same has been observed in some other forms of syncope. Some clinical observations that have been made at the Western Infirmary, Glsagow, with a binaural stethoscope, may be briefly noticed. In one case the heart's action rose from 100 to 152 in half a minute, and in another it rose from 84 to 132 during the first minute, and to 152 before the expiration of one minute and a half, and similar results were seen in other cases. In all instances the cardiac rate returned to normal just as the patient was pronounced "over" and only one case occurred which tended to prove that the quickened cardiac rate, instead of gradually slowing, may suddenly drop to a slow action, just as we have seen it do in dogs and cats. In this case the cardiac rate rose in two minutes to 132, and so continued for the next minute, but during the fourth minute there was an instantaneous fall to 96, although the action continued to be tolerably regular. I told the chloroformist that he had allowed a vapour reaction to occur by not renewing the dose of chloroform soon enough. What were the consequences? The patient began to talk loudly and to struggle violently, and within a minute his breathing gave cause for anxiety. If it be objected that the reaction did not give rise to syncope in this case the answer is that it was less in degree than it might have been, and there can be no doubt that these milder instances occur frequently. The coincidence with experimental results to be remarked is the instantaneous transition from the quick to the slow cardiac action, and this has been found to be associated in other cases in the human subject with irregular action and actual syncope. Deep anæsthesia in dogs and the human subject prevents this untoward result, but space forbids the discussion of the question why this should be so. The chloroformisation ought to go on to deep anæsthesia in spite of coughing, struggling or apnœal pauses of even a whole minute's duration. The use of the binaural stethoscope would be of great value in our infirmaries, and might be expected to throw light on disputed questions.

Glasgow.

A CASE OF WEST AFRICAN FEVER.

BY W. T. PROUT, M.B. EDIN., COLONIAL SURGEON, GAMBIA.

THE following case of fever, which occurred on the Gold Coast, may be of some value as a clinical contribution to the study of West African fever, inasmuch as it differs considerably from the ordinary cases of malarial fever which are met with and is of interest so far as its irregularity and duration are concerned.

The patient, a European, had been travelling along the coast by hammock, a fatiguing method of locomotion, and arrived at Cape Coast Castle on the afternoon of Sept. 26th, 1892. During the journey he had walked a good deal and had been exposed to the rays of the sun. On the morning of the 27th his head ached and he felt pains in the muscles of the neck and back, but thinking little of these symptoms, he went out shooting on a slow-flowing river, surrounded by mangrove swamps. On his return he felt much worse, and when I saw him about 7 P.M. his condition was as follows:—He was suffering from pains all over the body, neck and limbs, with severe headache; the tongue was very foul and constipation was present; the temperature was 101° F. An antipyrin mixture containing ten grains to the ounce was given twice with an hour's interval, and a pill composed of blue pill and colocynth and hyoscyamus was given at night.

Sept. 28th.—The temperature is 99° and the patient feels much better. He sweated profusely all night and has had one fairly copious stool. Twelve grains of quinine were taken at 7 o'clock and another twelve grains at 10 o'clock. At 6 in the evening the temperature had risen to 100·5° and the patient felt very uncomfortable. Ten grains of quinine were ordered.

29th.—The temperature is 99°; it rose to 100·5° in the evening. The patient had had no further motion of the bowels and complained of feeling constipated. Six grains of calomel, followed by a saline purge were ordered.

20th.—The temperature is 100°. He has had one stool. Twenty grains of quinine were taken during the course of the forenoon. At 4 o'clock I saw the patient again and found him suffering from intense neuralgic headache, with a temperature of 102·5° and a very foul tongue. I ordered ten grains of antipyrin every hour for four hours. Of these only two doses were taken, as according to the patient's statement the first dose had a magical effect and removed the headache in fifteen minutes. By 8 o'clock his temperature had fallen to 100°.

Oct. 1st.—The temperature is 102·5°. The patient is again suffering from headache. The temperature fell about 11 o'clock, but rose in the evening. Thirty grains of quinine were taken throughout the day. I first observed a slight feeling of tenderness on pressure in the epigastrium.

2nd.—The temperature is 101·9°. The patient is suffering from severe headache and general discomfort. Antipyrin was given to reduce the temperature and thirty grains of quinine were taken during the day.

3rd.—The temperature is 103·4°. The headache still persists; the tongue is very foul and of a muddy grey colour. The patient has no appetite and complains of a slight feeling of nausea at times. The pulse is fairly good. On examination the urine showed the characteristics of a febrile urine and contained no albumen. Antipyrin was again prescribed and at 4 o'clock the temperature had fallen to 100·5°, but rose later to 102·3°. Forty-five grains of quinine were taken during the day.

4th.—The general condition of the patient remained much the same throughout the day. Forty-five grains of quinine were taken.

5th.—On this day, the ninth of the attack, the patient was decidedly worse. The temperature reached a higher point—namely, 104·3°—than it had done previously, the headache and other symptoms remained much the same and the patient was undoubtedly weaker. As quinine by the mouth appeared to have had little effect in checking the rise of temperature I tried the effect of a hypodermic injection of the neutral sulphate of quinine (8 grains). Antipyrin with tepid sponging succeeded in reducing the temperature to 101·1° by 9 o'clock. Throughout the day liquid food was given regularly every hour or two in the form of milk-and-soda, and thin arrowroot, essence of beef, beef peptone &c., with champagne and soda at intervals. This treatment was continued throughout the subsequent course of the attack, with the exception that brandy was substituted for the champagne.

6th.—The patient now began to suffer from diarrhœa. He had six thin watery stools throughout the day of a brownish yellow colour. The temperature rose to 104·9° at 9 o'clock at night, but this was reduced by more than a degree by sponging. I examined the abdomen carefully, but could detect no tenderness in the iliac region.

7th.—The patient had a very bad night, with dreadful dreams. The temperature remained persistently over 103° till the evening, when it was reduced in the usual way to 102·5°. He had six offensive stools of the appearance of pea soup during the twenty-four hours. A mixture of bromide of potassium (gr. 30) and chloral hydrate (gr. 15) was given as a sedative at night.

8th.—He has had a very bad night. He has had six stools. The temperature was persistently 103·4° till the evening.

9th.—He has passed another bad night. At about 3 A.M. I was called to see him, and found him excited and restless. I injected a quarter of a grain of hydrochlorate of morphia, which quieted him. The temperature in the morning was 104·2°. On this and subsequent days I prescribed from 20 to 30 grains of antipyrin, to be taken at 10 o'clock, which always produced considerable sweating and lowered the temperature. At 11 o'clock the patient was sponged with tepid water, to which a little brandy and Florida water had been added, and from 19 to 20 grains of quinine were given by the mouth. Between 6 and 7 o'clock the antipyrin was repeated, and the sponging about 9 o'clock. Morphia was given hypodermically at night. He passed four stools of the appearance of pea soup during the day.

10th.—He passed rice-water stools during the day. In the morning I observed in the stools slight streaks of blood mixed with small lumps of semi-solid gelatinous matter. Towards the end of the day the blood had disappeared. He was extremely restless and uncomfortable all day, finding no relief in any position. The temperature fell by three o'clock to 99·8°, but began to rise afterwards, and by a quarter to seven had reached 105°, the highest point during the attack.

11th.—The patient's condition is much the same.

12th.—Towards morning the patient began to show signs of wandering. This persisted through the day, and took the form of incoherent and curious delusions. There was no violent excitement. His face has a pinched anxious expression, and is very pale; the tongue is very foul, and is covered with a thick yellow fur, with red irritable-looking edges.

13th.—He was incoherent and somewhat excited in the morning, when the temperature was very high (104·5°). Towards evening, however, the general condition had improved and he talked sensibly.

From Oct. 14th the improvement in the patient's condition may be considered to have commenced. There was no return of delirium and the temperature showed a slight diminution each day. Antipyrin and quinine were given regularly and liquid diet was persisted in. On the 16th the patient's tongue, which had hitherto been very foul, began to show signs of clearing from the edges. The stools were now reduced to one or two a day and were less offensive. On the night of the 17th he was able to sleep without an opiate, and on the following day I removed him to another room for a few hours and he was able to take a little solid food. On the morning of the 21st the temperature reached normal for the first time, though a slight afternoon rise persisted for some days after this. By the 28th he was able to go on board a steamship and he was invalided to Grand Canary, where he resided for several weeks.

Remarks.—The case differs from the ordinary attacks of malarial fever which are met with on the west coast of Africa chiefly in its duration and the high level of temperature maintained throughout the attack. At first there was absolutely nothing which could lead me to distinguish it from an ordinary attack of fever. There was the usual morning remission of temperature with an evening rise of a degree or two. It will be observed, however, that there is a certain resemblance during the first ten days to the course of the temperature in typhoid fever, the rise taking place by a series of irregular but gradual steps, which tend to be tertian in type as seen on Oct. 1st, 3rd and 6th. The failure of quinine to prevent the rise of temperature was the first thing which led me to suspect the existence of some complication, and that this was probably typhoidal in its nature was shown by the appearance of diarrhœa on the tenth day of the attack, and of streaks of blood in the stools on the fourteenth day. There was no abdominal tenderness throughout except the slight feeling of discomfort on pressure in the epigastrium

which is not uncommon in malarial fevers. The persistence and character of the headache, too, were unusual. Lastly, the very gradual fall of temperature, beginning about the 14th and amounting only to two-tenths or three-tenths of a degree daily is interesting. An examination of the blood in this case would have been of value, more especially if the malarial organism could have been identified; but unfortunately pressure of other work prevented my undertaking this investigation.

THE TREATMENT OF SEVERE CASES OF CONGENITAL TALIPES VARUS IN INFANCY.

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So much has been written recently about the treatment of severe cases of congenital talipes, and the subject has been discussed so thoroughly by men of great ability and experience, that I feel a certain amount of hesitation in reopening the question. My only excuse for doing so is that as there are so many different methods in use, the opinion of any surgeon who has given each a fair trial may be of some slight value. As the result of my exprience I would say that there are only two methods of treatment by means of which the deformity, if considerable, can be met at all satisfactorily. One is the so-called open method in which the skin and soft parts are divided till the foot can be made to occupy at once a position of moderate abduction, the tendo Achilles, and if necessary the other tendons, vessels and nerves behind the internal malleolus, with perhaps the posterior ligament, having been previously divided; the other method involves a divison of everything beneath the skin in the sole and inner aspect of the foot which opposes the foot being placed at once in a position of slight abduction, the tendo Achilles, and, if necessary, the other structures already enumerated being divided subsequently. The first method, though it suggests an apparently serious operation, is really a very trifling one. I have hastened very considerably the healing of the wound which results and also obviated subsequent extensive cicatrisation by changing the dressings on the second day and by applying a large skin graft over the whole of the raw surface, taking care to make the graft large enough to allow for the shrinkage which always takes place in it. The result which is obtained by this operation is apparently most satisfactory—the wound heals very rapidly and securely and the foot remains flat, but when the patient begins to walk on it the result is in my experience very unsatisfactory, since there is an absolute loss of continuity of all the soft parts in the sole of the foot. I have never obtained by this method a result with which I was satisfied, nor have I yet seen one. It has, however, the advantage of obtaining at once a perfectly flat foot without there being any excuse to have recourse to an appliance which may require constant attention to bring the foot gradually into a satisfactory position. The other operation, or that of complete subcutaneous section, is the one that recommends itself most strongly to me. In doing it, unlike the preceding method, it is, for obvious mechanical reasons, necessary to divide the structures in the sole of the foot before cutting those behind the malleolus. An india-rubber bandage is applied above the knee to control the circulation, so as to prevent the free bleeding that would otherwise occur, and then, by means of a strong long-bladed sharp-pointed tenotomy knife, everything beneath the skin that opposes the placing of the foot in a position of moderate abduction upon the astragalus is divided. This includes the several divisions of the plantar fascia, part of the internal lateral and annular ligaments, the superior internal calcaneo-scaphoid,[1] the inferior calcaneo-scaphoid and the long and short plantar ligaments, together with the tibialis anticus and all the tendons, vessels and nerves in the sole of the foot. This cannot be done satisfactorily through a single puncture, but I do not hesitate to make any number of punctures, only taking care that the knife is entered in such a direction that the forcible fixation of the foot in a position of abduction does not cause the wound made by it to gape. This is a matter of considerable importance, since it is frequently necessary to sew up the apertures which are made by the knife, otherwise arterial blood spurts through them on removing the tourniquet. By spending some time and by exercising a moderate amount of skill it is possible to divide all the soft parts opposing abduction of the foot on the astragalus and to leave the skin intact except for the punctures produced by the tenotomy knife. After this has been done I pass a knife between the skin and tendo Achillis and divide it. If the foot does not become square I cut all the soft parts except the peronei, carefully dividing the posterior ligament of the ankle-joint, which often opposes free movement of this articulation. The disadvantage of this operation, as compared with the open method, is that in bad cases the skin for a time affords an obstacle to the foot being retained in a good position and necessitates an application of a plaster-of-Paris bandage at intervals of about every three or four weeks, but no complicated appliance is required, the foot and leg being fastened to a back splint with a foot-piece, whose inner margin forms an angle of 25° with the vertical. Its great advantage is that the foot which results is a useful one, and one on which the patient can walk gracefully. The blood, which is poured out and which occupies the space left by the gaping of the divided tendons and other soft structures, organises, and in this dense cicatricial mass the proximal and distal portions of the tendons terminate, and if the case be carefully treated with plaster cases a useful foot is the result, which compares most favourably with the result obtained by the open method. I would assert with confidence that though the "complete" subcutaneous method is much more troublesome to carry out, it is at the same time also much more satisfactory in its results than the open method.

A factor of great importance in the treatment of the case after operation is to fix the foot in a position of abduction, this being the reverse of that occupied by the foot in the varus deformity, which is practically a posture of more or less extreme adduction. Now, in abduction of the foot its inner margin forms with the vertical an angle of about 20° or 25°; therefore to place the foot with its inner margin vertical, as is usually done, is not the best means of opposing its return to the varus posture. For this reason I always put the foot as far as possible in a position of abduction, preferring, if I can, to use a small back splint with a suitably fixed footpiece for the purpose.

St. Thomas's-street, S.E.

[1] This most important ligament I described in the Guy's Hospital Reports, 1886, p. 260.

A CASE OF ABSCESS OF THE LIVER IN WHICH THE USE OF THE ASPIRATOR WAS MISLEADING IN DIAGNOSIS; OPERATION; RECOVERY.

BY J. CLEASBY TAYLOR, M.D. EDIN., M.R.C.S.

ON the night of Feb. 9th, 1893, a man was landed in Las Palmas from a homeward bound African ship, his most urgent symptoms being weakness and dyspnœa. He had resided on the West African coast for the past seven years and had enjoyed good health, rarely having any malarial attacks, though five years ago he was invalided to Las Palmas and came under my care for an attack of "blackwater fever." In April, 1892, when at Cape Coast Castle, he had an attack of dysentery which was neglected and which continued for some weeks. He never quite regained his strength, and left the coast in August for England, where on arrival he completely broke down, his chief symptoms being rapid loss of flesh and appetite and loss of sleep. At this time he began to notice a certain amount of breathlessness and a slight fulness in the epigastric region with a vague sense of uneasiness when lying down. Obtaining no relief and his condition being ascribed to the cold he sailed once more for Cape Coast Castle in November, 1892. He lived there for one month, during which time his breathlessness and a troublesome cough were the predominant symptoms. In the middle of January he was put on board the homeward mail as a case of advanced phthisis in the hope that he might reach Grand Canary. Two days before arriving at Las Palmas the dyspnœa became more urgent and with the cough there was purulent expectoration. When I saw him at an hotel he was extremely anæmic and

so emaciated that the upper arm could be easily clasped by the thumb and forefinger. The temperature was 99·5° F. in the morning and 102·5° in the evening; respiration from 48 to 50 per minute and a pulse never under 130. There was no apex beat, but a pulsation was to be felt under the left coracoid process. The intercostal spaces of the right side were wide and there were all the symptoms of fluid in the right pleural cavity reaching from below the level of the second rib to the costal margin and across the middle line to the left. In the epigastric and hypochondriac regions there was a tense globular tumour which extended nearly to the umbilicus; this had rather decreased in size for a few days previously but coincided with an increase in dyspnœa. Soon after I first saw him he expectorated half a teacupful of a reddish purulent material perfectly homogeneous. In the evening of Feb. 10th, as his breathing became most distressing, I introduced an aspirator needle in the mid-axillary line of the right side and withdrew fifteen ounces of brick-coloured pus; this afforded some relief, but at 4 A.M on the next day I again withdrew twenty ounces of the same material. Early in the morning, in consultation with Dr. Chapman of Inverness, Surgeon-Major Stewart of Laguna and Dr. Jones, we agreed that we had to do with a case of abscess of the liver that had burst into the pleural cavity and that it was beginning to find an exit through the lung; we further decided to treat the case as an empyema. An incision was made close to the aspirator needle punctures in the fourth interspace. On my removing the piece of rib I noticed a few drops of clear brown fluid oozing, and on inserting the point of the knife there gushed out more than twenty ounces of perfectly clear serum, brownish in colour. The breathing at once indicated that the pleural cavity had been entered, but the point of the knife was still engaged in a white shining tendinous-looking membrane that bulged into the floor of the wound. On this being incised at a depth of less than half an inch a few drops of pus trickled along the side of the blade. The knife was withdrawn and the incision enlarged, in the first instance with the finger, when a great quantity of brick-coloured pus escaped. A drainage-tube a quarter of an inch in diameter and six inches in length was inserted and the patient was placed in bed. For eighteen hours his condition was not very satisfactory, the collapse being great and the breathing difficult. The flow of pus was so copious that no dressings could be applied. I laid him on an indiarubber sheeting *in puris naturalibus* (the temperature of the room was 69° F.) covered with a blanket, and by this means he was easily kept clean without being moved or disturbed. At the end of eighteen hours the abdominal tumour had disappeared, the flow of pus was much diminished and the general condition somewhat improved. The total amount of pus could not be measured, but it was probably not less than eight pints, perhaps more, and this independently of the clear serous effusion from the pleural cavity. The after history continued satisfactory; the patient lost his ghastly anæmic look and gained weight. The wound was washed out night and morning with carbolic solution (1 in 100) and dressed with pads of wood wool; the pus never became offensive nor did the drainage give the slightest trouble and the tube was gradually shortened to three inches. At the end of the seventh day the patient was laid on a couch in the garden, and at the end of the fourteenth day he was able to walk unassisted. Early in April the discharge had gradually diminished almost to a minimum, but the general condition began to be not so satisfactory, there being a rise in the temperature in the evening and a tendency to fall off in weight was noticed. Thinking this might be due to the irritation of the tube I withdrew it and inserted three inches of a No. 12 catheter. This made no difference in the general condition, but as the amount of discharge gradually grew less and no collection of pus could be made out either in the pleura or epigastric region, I thought it might still be due to the tube; and as there appeared to be little use in keeping it in I withdrew it altogether, but once a day inserted a director in the sinus, along which there trickled a few drops of clear biliary fluid but no pus. For three weeks the case retrograded, when one night the patient suddenly coughed up a considerable quantity of creamy pus, which continued occasionally for two days in varying quantities. After this the temperature fell to normal, the appetite and sleep returned, and the case progressed favourably. When he passed out of my hands on his leaving for England the general condition was greatly improved; one or two drops of clear biliary fluid still trickled daily along the sinus; and in connexion with this it was interesting to note that on the days when the fæces were pale in colour this fluid was thin, watery and pale, but when the fæces were brown the fluid was darker and oily in character.

The interesting points in this case are the arching of the diaphragm to so great an extent that its tendinous surface came in contact with the costal pleura, and the aspirator needle passed directly from one to the other structure and led to the conclusion that the pus was in the pleural cavity. The pleural surface of the tendinous part of the diaphragm was perfectly smooth and shining, and, as far as could be made out, there were no adhesions of the lung. How the pus connected with the abscess was expectorated from the lung is a matter of conjecture owing to the great displacement that had occurred, though the absence of adhesions and empyema and the presence of serous fluid militate against the supposition that it passed through the right pleural cavity, and although on the mediastinal surface there may have been some limited adhesion any passage of pus through the left pleural cavity can be entirely discounted. The only other point of interest is the great ease with which the abscess was drained when the patient was in the erect position. The opening must have been in the upper part of the abscess cavity, though when lying on his back this was the most dependent part, particularly towards the end of the case, for then the sinus ran from the mid-axillary line straight towards the spinal column.

Las Palmas, Grand Canary.

THE MORBID ANATOMY OF EPILEPSY.

BY E. T. WYNNE, M.B. CAMB.

THE pathology of idiopathic epilepsy being still a matter of speculation, it is of the greatest importance to inquire whether this disease has a morbid anatomy peculiar to itself. If such can be demonstrated there will be solid ground on which to build theories of its pathology. Amongst the many morbid conditions put forward from time to time as being characteristic the following may be mentioned and then put on one side as merely curiosities in the pathology of epilepsy: sclerosis (cartilaginous hardness) of the cornu Ammonis (Meynert); dilatation of the vessels of the medulla (Van der Kolk); and pigmentation of the cells of the medulla (Voisin). In twenty necropsies on undoubted epileptics I have once found the condition described by Meynert. In this case the right cornu was only moderately sclerosed, but the left had much the consistence of cartilage. Curiously enough, this occurred in one of the youngest and least severe cases. The other conditions are not peculiar to epileptics and are by no means always present. To Mr. Bevan Lewis, however, we are indebted for another very different morbid histology and one which is worth careful investigation. His great experience and well-known skill as a microscopist must outweigh evidence based on only twenty cases; but if, after careful investigation by the latest methods, twenty cases are found not to present the chafacters he has described, then it must be that either the theory is wrong or that the point to be determined is so difficult to demonstrate that it should not be admitted without full corroboration by other observers. It is in the hope that the pathologists who are attached to large asylums may be induced to give their experience that I have ventured to write this short summary. Mr. Bevan Lewis' chapter on the Morbid Histology of Epilepsy is not so clear as the rest of his book,[1] and one is left in doubt as to whether he regards the lesion described as being significant of epilepsy or of epileptic insanity; nor does he absolutely affirm that the lesion is the cause of the epilepsy; but his whole line of argument must lead one to assume that he is describing the causal lesion of epilepsy. The nature of the lesion is also somewhat difficult to understand. It is first "a preponderance of vacuolation of the cells of the second layer of the cerebral cortex;" but "the change in the cell is not peculiar to epilepsy; it occurs in other diseases, but never to so marked a degree and limited to such special cortical areas." There is also a morbid condition of the connective tissue: "the connective element or neuroglia is invariably in excess"—"we do not meet with the presence of spider-cells ..... we find a freedom from hypertrophic states of the lymph connective system." Thus we have—

[1] Text-book of Mental Diseases.

(1) preponderance of vacuolation of the second layer; (2) an absence of spider cells; and (3) an excess of neuroglia.

1. Mr. Bevan Lewis limits the preponderance of vacuolation to special cortical areas, but he does not explain what he means by areas. It may, of course, mean certain motor areas or it may be meant to indicate the preponderance of the lesion in the second layer. If it can be shown that the lesion in the second layer is not the lesion of epilepsy, then the question of special areas need not be discussed. Mr. Bevan Lewis points out that the lesion is one which requires very careful staining to show. It should, therefore, be stated at the outset that in the twenty cases on which this paper is based every precaution was taken, various parts of the cortex were examined with a $\frac{1}{12}$ in. oil immersion, and sections were prepared in various ways (osmic acid, permanganate of potash, China blue, blue black &c.). The vacuolation of the nucleus is a lesion which can with care be fairly easily detected with a $\frac{1}{4}$ in. objective or with a $\frac{1}{12}$ in. oil immersion lens, it is impossible to overlook it even if the staining has been somewhat overdone. The results obtained in these twenty cases may be briefly stated as follows. In some instances vacuolation of the second layer was readily detected, though never (even in the gyrus hippocampi, where vacuolation is almost invariably most marked in all brain diseases) to the extent figured by Mr. Bevan Lewis. In others it was only after the most laborious search over many sections that it could be found. This difficulty was not caused by the minuteness of the lesion in these cases, but from the great paucity of the affected cells. In all cases, after prolonged search over many sections from various parts of the brain, the lesion could be detected, as possibly it might be with equal care in other diseases—e.g., senile atrophy or general paralysis; but though in all cases cells could be found in the second layer containing a vacuole in the nucleus, yet in not one instance was there a preponderance of the lesion in that layer. Whenever there was distinct vacuolation of the second layer there was much more distinct vacuolation of the deepest layers. Often when the vacuolation of the second layer was with the greatest difficulty detected—on account of the paucity of cells affected and not, I think, as it is asserted, owing to the minuteness of the lesion and the difficulty of staining—the vacuolation in the deeper layers would be abundant. It is true that there appeared to be a proportion between the vacuolation of the two regions, but the preponderance was always in the deepest layers. This holds true as regards the gyrus hippocampi as well as other parts of the cortex.

2. In considering the second characteristic of the epileptic brain we are met by a difficulty of definition. To ascertain the significance of "freedom from hypertrophic states of the lymph connective system" it is necessary to carefully consider the chapters on histology. After doing so everyone must conclude that it means an absence of spider cells.[2] Now a spider or scavenger cell is defined as being a cell with many fine processes and one or more thick vascular processes which terminate in a vessel. Such cells form a conspicuous feature in general paralysis; but in any section from a general paralytic cells which are undoubted spider cells may be found which do not answer to this description, and in Plates XV., XVI. and XVII. of Mr. Bevan Lewis' book cells labeled "spider cells" are to be seen which have no thick or any other process going to a vessel. Unfortunately it is left to the reader's imagination to conceive an excess of neuroglia with an absence of spider cells; but, accepting Mr. Bevan Lewis' differentiation of a scavenger and a hypertrophied neuroglia cell, it does not seem to hold good that there is an absence of spider cells in epilepsy. Spider cells are not at all infrequent in epilepsy. They are not so conspicuous as in general paralysis because the vessels to which they are attached are not so conspicuous. Mr. Bevan Lewis would consider the presence of spider cells as being due to chronic alcoholism or some such condition superadded to the epilepsy. Yet in the case with the cartilaginous cornu Ammonis the spider cells were abundant in many parts of the brain. Now this patient had been an inmate of an asylum for over two years, had never presented any signs of general paralysis and died at the age of eighteen, and I have the assurance of Dr. Wiglesworth, the medical superintendent, that the case throughout was that of a typical epileptic. Here, therefore, there is no question of chronic alcoholism, general paralysis or senile atrophy, the conditions in which spider cells are common.

3. An excess of neuroglia is undoubtedly present in epileptic brains, but it is not present in any special regions—though at times, as in the above case, the cornu Ammonis is specially affected—and it is a very common condition in all kinds of insanity. In melancholia it is perhaps less conspicuous than in other kinds.

Thus the three features recognised by Mr. Bevan Lewis do not appear to be by any means characteristic of epilepsy and cannot stand in relation to epilepsy as cause to effect. The changes which all who have examined these brains by modern methods will admit to be present—viz., vacuolation of cells (especially about the cornu Ammonis) and an excess of the connective tissue, whether called "lymph connective" or "neuroglia"—seem to be the results of some irritant which may be the cause of the epilepsy. Dr. Haig has suggested uric acid, and its slow or rapid accumulation may perhaps account for the irregular nature of the attacks. The assumption that the primary cause is some peculiarity of the nerve cell is purely theoretical, and there are no facts opposed to the supposition of an irregularly accumulating poison. Those parts of the brain where products would be liable to accumulate are the parts where histological changes are found to be the most marked—e.g., in the cornu Ammonis. It is quite possible that the abundant vacuolation may be due to the severe drugging which asylum patients often undergo. The twenty cases on which these observations are founded presented all kinds of epilepsia gravior and the modes of death were various—e.g., status epilepticus, lung diseases and old age.

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[2] Mr. W. Lloyd Andriezen, in Brit. Med. Jour., July 29th, shows a spider cell under the name "protoplasmic neuroglia cell," and considers these cells as mesoblastic in origin, while the ordinary "glia cells" are epiblastic.

A FATAL CASE OF HERNIA DUE TO SLOUGHING OF THE OMENTAL STUMP.

BY SURGEON-CAPTAIN TOWNSEND SHAW, I.M.S.,
CENTRAL INDIA HORSE.

THE following case is worth recording on account of an accident which occurred during the operation and from the cause of death being found out only on post-mortem examination.

A native aged forty, in poor health, sought relief at the hospital for a right inguinal hernia about the size of a small cocoanut. He was unable to do any work owing to the pain &c. and was very anxious to be operated upon. I refused to operate until he was in a better state of health, so he stayed in hospital, but only for a week, then saying that he must have something done. On May 19th the operation was performed and a small piece of perfectly healthy omentum was found in the sac. A single catgut ligature was put round it, but on being tied tightly it broke twice, and as I had no other I placed a medium-sized silk ligature round the mass, and cut and returned the latter into the abdominal cavity. I gave the sac five complete twists with a large Spencer Wells' pressure forceps (the most suitable instrument available in the hospital) and placed a silk ligature round it. I thought the tension was rather excessive; however, I cut the remainder off just in front of the forceps and removed the latter; the ligature slipped and the sac-stump disappeared from view. As I failed to recover it after many attempts, I extended the incision about two inches and a half upwards—i.e., made a sort of abdominal section,—caught the sac and ligatured it, bringing the ends out through the muscle on each side. A drainage-tube was placed in the back of the scrotum and the wound was closed with silkworm gut. The subsequent progress was briefly as follows: The upper two-thirds of the whole wound closed immediately. Acute hydrocele developed after three days and caused a little sloughing of the scrotal tissues near the incision; it was painless, however, and subsided in a few days. From May 19th (the date of the operation) till the 24th he had a small amount of fever. From the 24th to the 31st the temperature remained normal, the patient progressing favourably. Then, from the 31st the temperature rose every evening to 99·5° F. or 100°, falling a degree in the morning, until on the 16th it rose to 102°, falling a degree and a half till June 21st, when it began to fall steadily, remaining at 96°

for some days. I made frequent and careful examination to find out where the mischief lay. There was absolutely no pain on pressure over the abdomen. The patient's condition was what might have been expected; his tongue was dry and furred; his stomach was intensely irritable, the pulse being weak, though it frequently was 76 when his temperature was from 99·5° to 100° and even 102°; his bowels were fairly regular, and the motions hard and clayey. Shortly before death he had a severe attack of diarrhœa. I endeavoured to transfuse a saline solution, but only injected two and a half ounces, as my needle was too large to allow the blood to pass it on. He died on July 9th, fifty-one days after the operation.

Necropsy, four hours after death.—The peritoneum was found to be smooth and glossy; the intestine was slightly congested. The internal ring on the side operated on was barely discernible and was quite free from any signs of inflammation and from any puckering. The omentum was somewhat congested, but otherwise showed nothing abnormal until I sought for its terminal portion. This had formed adhesions with some pelvic intestine, and on breaking these down a large quantity of oily, odourless, greenish-yellow pus welled up, with a little white gelatinous material. The fimbriated end of the broken-down gelatinous omentum lay bathed in the pus, which was plugged off from the upper abdominal cavity by the adherent omentum. There were no blood-clots and no trace of the ligature could be found.

Remarks.—The amount of omentum ligatured was trifling; had the ligature been septic eleven days would hardly have elapsed without septic mischief appearing; moreover, when septic peritonitis sets in after a hernia operation it spreads, as Mr. Hutchinson says, "with the rapidity of lightning"; finally above the plug of omentum there was no trace of peritonitis. Mr. Southam[1] says that "ligature of the omental pedicle with catgut and excision of the mass beyond is not attended by any danger, though this is quite at variance with the teaching of the older surgeons"; he quotes Lawrence. Speaking of strangulated omentum Mr. Erichsen says that it may be tied with a double ligature of whipcord or silk, but that as "a ligature of this kind might become a source of irritation if it were drawn into the peritoneal cavity it must not be cut short." An ovarian ligature of whipcord, tied as tightly as possible, has three-quarters of an inch of pedicle projecting beyond and cut off from its blood-supply. Why does it not slough? In the case noted above I can only explain the fatal result by supposing that there was not sufficient vitality in the tissues to lead to the organisation (or whatever process occurs) in the very small stump of omentum. The hospital assistant informed me that "the man ate a piece of opium the size of a drachm (*sic*) three times a day."

OTITIS MEDIA PURULENTA; PYÆMIA; RECOVERY.

BY JAMES E. BLOMFIELD, M.B., B.S. OXON. &c.

I HAVE thought that it would be of interest to publish the history of a case of purulent middle-ear disease, with pyæmia and possibly phlebitis, which ended in recovery, in view of the extensive operations that are now undertaken for the relief of this condition, and in order to show that nature does certainly in some instances effect a cure.

I first saw the patient, a pale girl aged eleven, in September of last year and found her to be suffering from purulent otitis media of long standing in both ears—ever since infancy, in fact,—with considerable diminution of hearing power, which improved considerably after inflation by Politzer's method. The ears were washed out two or three times a day with boracic acid lotion and dried boracic acid in the form of powder was injected. After about a fortnight's treatment the discharge dried up and she ceased to attend till November, when she came complaining of pain in the left ear and over the temporal region of the same side. In the meatus there was a small quantity of foul-smelling, purulent discharge. The right ear was free from discharge. Thinking that the temporal pain might be neuralgic I gave her small doses of antipyrin, but on the following day I was sent for and found her in bed with a flushed, feverish appearance, the temperature being 98·8° F. She had been very sick and had had three rigors. I dressed the ear very carefully and blew in iodoform, and left directions for the ear to be syringed, dried and injected with iodoform every four hours as nearly as possible. On the following day (Nov. 9th) she was better, but the pupils were dilated and acted slowly to light. There was no tenderness or redness over the mastoid, and I gave her one grain of quinine every four hours. On Nov. 10th the sickness had stopped, but she had two rigors; there was no odour from the meatus and only red granulation was to be seen. The pupils were still dilated and did not contract to light, and both optic discs were blurred and were with difficulty distinguished from the surrounding red fundus. From this date matters grew worse, the temperature in the morning being generally above 100°. The rigors continued at the rate of three or four in the twenty-four hours and the tongue began to be dry and red, but the pain became less in the head, though there was a constant complaint of pain down the left arm. The pupils improved and became fairly normal, contracting to light, and the optic papilla could be easily seen on each side. The pulse became weaker, being about 100, and necessitating the administration of brandy. This state of things continued until Nov. 21st, when there were some œdema and redness behind the ear, which became more marked during the following days; and on Nov. 25th, with the assistance of my partner, Dr. Alliott, I made an incision behind the ear, coming down on to bare bone and giving exit to a quantity of very fetid pus. After this had been done it was possible to syringe sublimate lotion (1 in 1000) freely from the incision, out through the meatus, so that I thought that with the help of a tube the drainage would be sufficient, but in the evening there was another rigor and on the following day a rigor with a temperature of 105·2°. On this day (Nov. 26th) the ear was dressed and syringed through the wound. I noticed that a swelling which commenced at the angle of the jaw had increased in size and extended downwards towards the clavicle. The rigors continued and the case seemed as if it would soon terminate in death. I consulted Mr. W. W. Wagstaffe, who agreed with me as to the gravity of the case; but before attempting any further operative interference it was necessary to obtain the consent of the parents. This was withheld, so that I was reduced to watching the natural course of the disease, which looked at this time as if it would cause the death of the patient in a day or two at the longest. The rigors continued, the temperature rising to 104°. The swelling continued to extend downwards from the angle of the jaw to the clavicle; it was hard and tender and the skin over it was rather red. On my visit on Dec. 4th I was struck wth the alteration of the appearance of the patient; she looked bright and cheerful, and the whole aspect of the case had changed. During the night there had been a copious discharge of foul pus into the dressings over the ear, though whether it came from the incision or the meatus was doubtful. There was another abscess beginning to point above the clavicle, which burst on the following day, and on injecting carbolic lotion into this a considerable quantity went in, though it was not possible to syringe any in so that it would come out at the ear incision. Under general treatment these abscesses healed and left only a thickening of the skin, which gradually disappeared as her health improved.

Such is the clinical history of the case. At the time I was seeing the patient I had not read the interesting papers by Mr. Charles Ballance in THE LANCET of May 17th and 24th, 1891, to which I must refer those readers who wish for a more complete account of the disease and the operations that are undertaken for its relief, but I may recapitulate the signs which he gives as indicating septic thrombosis of the lateral sinus: (1) purulent discharge for a period of more than a year; (2) sudden onset with headache, rigor, vomiting and pain in affected ear; (3) oscillating temperature, reaching from 103° to 105° and then dropping, say, below 100°; (4) vomiting, repeated day by day; (5) a second, third or more rigors; (6) local œdema and tenderness over the mastoid or in the course of the internal jugular vein; (7) tenderness on deep pressure at the posterior border of the mastoid and below the external occipital protuberance; (8) stiffness of the muscles of the back or side of the neck; and (9) optic neuritis. In the case above related most of the signs were present with the exception of Nos. 7 and 8, but no attempt was made to elicit deep-seated tenderness behind the mastoid, so that it might have been present but overlooked. There was certainly no stiffness of the muscles of the side and back of the neck. Comparing the history of the case with those

[1] Medical Chronicle, June 1885.

published and referred to by Mr. Ballance it would seem that it must be placed in the same category as those he discusses, and the favourable termination of the case must be regarded as being unusual and rather to be attributed to good fortune. It may be that the septic process was not so deeply seated as to involve the lateral sinus and internal jugular, which would account for the termination, but if this was the case how is one to distinguish one condition from the other?

Sevenoaks, Kent.

TWO CASES OF
DISEASE OF THE HORIZONTAL SEMICIRCULAR CANAL.

BY RICHARD LAKE, F.R.C.S. ENG. &c.,
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CASE 1.—A strong young man of twenty years of age, who had suffered from left otitis media purulenta since an attack of scarlet fever in childhood, complained of pain in the left ear associated with severe attacks of giddiness. On examination inflammation over the apex of the mastoid was present and a polypus was seen lying deep in the meatus, which after removal was found to have sprung from the entrance into the mastoid antrum. One month later he returned complaining of a recurrence of the symptoms, which proved to be due to a polypus arising from the same site as the first one. On touching this growth with a probe severe vertigo was produced, which was described by the patient as being "side to side" in character. At the moment of removing the polypus he almost fell to the opposite side. Nystagmus was not noticed. After the hæmorrhage had entirely ceased I searched with a probe to find whether I was able to reproduce the vertigo by either pressure on the stapes or in the region of the horizontal semicircular canal, which would lie above and behind the fenestra ovalis. Pressure on the stapes gave negative results, but on firm pressure at the spot described above vertigo and the tendency to fall were produced; these symptoms could not be reproduced after cicatrisation had once commenced.

CASE 2.—A lad aged thirteen had suffered from left otitis media purulenta for eleven years. In this case I had been obliged to open the mastoid antrum, and when I saw him about twelve weeks after the operation the wound caused by it was still patent. On syringing through this canal, formed by the bone sinus, attic and external auditory meatus, which latter was extremely narrow and contracted, I had to use considerable force and must have raised the pressure of the fluid in the middle ear considerably above what could have been obtained had no contraction of the meatus been present. Suddenly during the syringing the boy complained of vertigo, which was described by him later as being "side to side" in character, and by fixing the eyes I was able to prove the presence of lateral nystagmus. I could not probe this boy's ear to try to find the exposed membranous canal on account of the extreme narrowness of the meatus.

Vertigo of aural origin may be caused by irritation or pressure acting on the auditory nerve in any part of its course from its origin to its termination in the labyrinth, and it has also been proved frequently to be of central origin and at times to be due solely to the retention of effete products in the blood. In mammals a vertigo with nystagmus is produced on section of the membranous semi-circular canals, the nystagmus varying—as well as the vertigo—in direction and the animals falling either one way or the other, but without loss of the power of hearing. On section of the horizontal canal in mammals there occurs a rapid or "side-to-side" pendulous movement of the head,[1] with lateral nystagmus; and if this—the result of experimental research—is compared with the clinical facts related in the first case there will be found a spot in the position where the horizontal canal approaches the surface, the others lying deeper in the petrous bone, which on pressure gives rise to peculiar "side to side" vertigo, almost causing a fall. In the second case, although the exact spot is not localised, lateral vertigo and lateral nystagmus are to be produced by abnormal pressure in an ear for a long period eroded by the action of pus. These symptoms, it will be seen, are exactly similar to those caused by experimental injury to the horizontal semicircular canal. Vertigo also is a not infrequent symptom following immediately on the removal of aural polypi, but it is seldom excessive and it is probably due to three factors, acting either in concert or one predominating. These factors are: (1) a sudden increase in the blood-supply in the labyrinth due to the damming back of the blood previously going to the growth; (2) a sudden impact of air on to the stapes; and (3) the influence of pain; but in these cases it is giddiness and not true aural vertigo, and it may even follow the removal of a small button of granulative tissue. Again, a genuine vertigo is frequently caused by forcibly syringing out the ear in cases of otorrhœa in which a perforation of the membrana tympani is present, and it is due to the sudden pressure being transferred *viâ* the stapes to the labyrinthine fluid. In middle-ear catarrh, with obstruction of the Eustachian tube, vertigo frequently follows the sudden inflation of the tympanum. This also is due to the sudden increase of labyrinthine pressure in consequence of the stapes being driven into the fenestra ovalis. Müller once obtained vertigo by pressing on the stapes with a probe. Urbantschitsch[2] has reported a case in which all attempts to remove a polypus were attended by excessive vertigo, necessitating the abandonment of the operation. In both these cases "vertigo" is the term used, but in neither is any description of it given; and in the former case, at all events, it may be assumed that giddiness only was experienced.

Seymour-street, Portman-square, W.

[1] Urbantschitsch: Ohrenheilkunde, p. 409.

[2] Ohrenheilkunde, p. 363.

A CASE OF
OVARIOTOMY WITH INTERRUPTED PROGRESS; RECOVERY.

BY G. W. DAVIS, M.D., B S. DURH., M.R C.S., &c.

THE following is a case which appears to me to possess some points of special interest. 1. It emphasised to all those concerned in the diagnosis the great difficulty which often exists in deciding between a large semi-solid ovarian tumour and that tumour which is the outcome of pregnancy. 2. As regards the question of the effect of injury on the growth of ovarian tumours. 3. The operation impressed upon those who were present the difficulties attending the mere delivery of a non-collapsible and large tumour, which cannot be diminished by aspiration or by breaking it up with the fingers. The impossibility of removing such a tumour, once firm adhesions were contracted, was rendered evident and became an argument for early operation in such cases and against aspiration. 4. The after-progress of the case is encouraging—while there is life, there is hope.

A domestic servant aged nineteen, single, short of stature and of dark complexion, with a history of her mother having died of phthisis, came under my care on Feb. 26th for the diagnosis of an abdominal tumour. The tumour she ascribed to two kicks that she had received in the abdomen, the first in the spring of 1892 and the second in the following summer. The tumour had been noticed for five and a half months and had been associated with slight menstrual loss every fourteen days, which contrasted with the previous performance of that function, as from the age of seventeen it had recured every five or six weeks. The tumour occupied the whole of the abdomen, from the ensiform cartilage almost to the pubes, and bulged out the flanks; three-quarters of its circumference was occupied by a relatively solid and resistant mass, the remainder yielding a most definite sense of fluctuation. It was absolutely symmetrical as to mensurement, being seven inches from the umbilicus to the anterior superior spine on each side. As the result of the examination a left ovarian tumour was diagnosed, multilocular and of partly solid consistence. The patient was admitted into the Sidcup, Chislehurst and Cray Valley Hospital on March 1st. From that day to the 13th (when she menstruated for one day), she was on full diet in bed; and from the 13th to the 23rd she was dieted on fish, milk, bread &c. Her urine was measured every twenty-four hours and was found to be normal. On the evening preceding the operation she was given a dose of liquorice powder. On March 24th all the instruments were boiled for fifteen minutes in distilled water. The ligatures were

boiled in a 1 in 40 carbolic solution. During the operation the operator and those assisting him steeped their hands frequently in carbolic solution and no instrument was used after being laid aside without rewashing. Sponges had been prepared by being first boiled and then soaked in a carbolic solution. The patient made a hearty breakfast at 6 A.M. At 9 A.M. an enema was administered and an apron of lint that had been soaked in a 1 in 40 carbolic solution was placed on the abdomen and covered with gutta-percha tissue. At 11 A.M. a catheter was passed and the patient was placed on the operating table at 11.15 A.M. Chloroform was administered and the abdomen was shaved and washed. An incision three inches long having been made in the linea alba, the highly glazed, opaque, bluish-white surface of the tumour was exposed, moving with the respiratory rhythm. A partial incision having been made into the thick cyst wall, the Spencer Wells trocar was introduced. Some glairy fluid, with floating cheesy masses, passed at first through the tube and then through the joints of the trocar, which was withdrawn. By means of cyst forceps and large compression forceps that portion of the cyst opened was drawn out of the abdominal incision. Digital exploration inside the cyst revealed its compound nature. On all sides around were felt the jutting contours of secondary cysts, and at the upper part a semi-solid mass of netted fibrous strands, strongly resistant to the finger, was felt. Further attempts to diminish the mass—first by means of a smaller trocar, and then by means of the finger—failed. The abdominal wound was enlarged downwards for one and a half inches, and on the hand being introduced an attempt was made to define the limits of the cyst, but without result. Compression forceps were attached, and traction in various directions discovered that of least resistance. By carefully easing and continually changing the direction of the line of traction the cyst was at last delivered. Two pieces of omentum that were exposed to soiling by cyst contents and blood were ligatured with chromicised gut, and removed at the upper angle of the wound. The pedicle, which was rich in large veins and was two inches across, was ligatured with Chinese silk after the manner described by Dr Robert Sanderson of Brighton in THE LANCET of May 28th, 1892. An enema, consisting of a pint of hot coffee, was administered to the patient and revived her very much. The abdomen was flushed by pouring into the abdominal cavity direct from a ewer, distilled water heated to 100° F. and containing boracic acid. Further flushing through a syphon was directed into the iliac fossæ by means of Lawson Tait's trocar. The abdominal wound was closed by means of silkworm gut, a Keith's tube being placed between the last two stitches. A square of gutta-percha tissue was secured to the tube and enveloped a sponge, the whole being covered by a many-tailed flannel binder. Later the patient felt some pain at the site of the tube, which was relieved by a morphia injection. The sponge dressing was changed every hour. The patient passed a fairly quiet night. One drachm of hot water was given at intervals. The temperature at midnight was 99°.

25th.—She slept for two and a half hours during the morning; the wound was dressed three times, the drainage-tube being removed at 1 P.M (forty-eight hours after insertion). The wound was dressed with cyanide gauze and iodoform. She vomited one ounce at 1.15 P.M. The catheter was passed three times and twenty-four ounces of urine were withdrawn; there was no albumen. Nutrient enemata were injected at 1 P.M. and 5 P.M. Milk-and-soda was given at intervals from 8.15 P.M in quantities of one ounce.

27th.—The bowels were moved to-day.

29th.—The stitches were removed, and the many-tailed strapping substituted as support.

April 2nd.—The patient went on well, with practically a normal temperature. The pulse had been fluctuating during the first five days and had reached 120 on two occasions, but had recently fallen to 80.

5th.—The temperature alternated between 99°F. in the morning and 100.2° in the evening; the pulse was 104.

6th.—The temperature was 102.5°. The bowels have acted regularly.

7th.—The temperature was 101.5°. There being now a marked prominence in the left iliac region, together with great sense of resistance and tenderness in an area limited superiorly by a line drawn horizontally from the left anterior superior spine and internally by the middle line, at my urgent request, Mr. Makins came to see the patient. Chloroform having been administered, an incision was made over the most prominent part of the area in question down to the fascia transversalis. There being no indication of inflammatory accumulation it was thought unwise to open the peritoneum without a more definite indication. The sheath of the rectus was sutured and the edges of the abdominal wound brought together. A piece of ordinary drainage-tube was put into the site of the original one and a second piece into the new wound, the tube extending through the sheath of the rectus.

15th.—The condition of the patient was one which caused much anxiety, the temperature being 104° and the pulse small and rapid (120); there were anorexia, headache and drowsiness. Mr. Makins, in answer to my report, advised me to direct my attention to the site of the original drainage wound.

16th.—The patient's condition being no better I determined to take a decided step. With great gentleness I insinuated a long bullet probe, and after many attempts it passed without resistance six inches in the direction of the right iliac fossa, and by means of a pair of artery forceps I passed five inches and a half of drainage-tube in the same direction before withdrawing the probe. A suitable dressing was placed around and over the tube and it was surmounted with gutta-percha tissue.

17th.—About two ounces of sero-purulent fluid were found on the wool at the next dressing. The temperature fell to 97.4° and rose later to 99°; the pulse was 88.

18th.—The patient complained of much pain at the site of the tube; later the discomfort increased, with pain on micturition and defecation. The temperature at 8 P.M. was 101.5°.

19th.—The tube was removed and an entire cast in coagulum of lymph was left; the upper part, some three and a half inches, of this was removed, iodoform was dusted in and the wound dressed.

21st.—The temperature on this and the previous day reached 101.5°, but the condition was quite altered; the patient was bright, took food with pleasure, and was no longer a source of anxiety. At the latter part of the day the temperature fell to normal and never deviated from it afterwards.

May.—The patient was sent to Westgate, where she remained for three weeks.

July.—The patient has now resumed her work as a domestic servant; she has menstruated twice with perfect regularity for the first time in her life. The tumour, which weighed about 12 lb., was found on microscopic examination to consist of a thick capsule and trabeculæ of fibrous tissue, containing very tenacious, semi-solid, myxomatous matter.

I should like to acknowledge the kind assistance of Messrs. Battiscombe, Combie, Lawson and Smith, officers of the hospital, and of Dr. H. E. Harris of St. Saviour's Infirmary.

Sidcup, Kent.

HIGH FREQUENCY CURRENTS AND "HARMLESSNESS."

BY W. S. HEDLEY, M.D. EDIN., M.R.C.S. ENG. &c.

THE high frequency *furore* has invaded the field of physiology and even that of electro-therapeutics. It is possible and probable that on subsidence it may leave behind it results of solid and lasting value. It is conceivable even that our present electrical methods are on the eve of revolution and that currents of high frequency and potential may eventually displace the three conventional forms of current ordinarily used in medicine. In the meantime the physician must keep an open mind—a "level head." His attitude must be that of inquiry, tempered perhaps by a wholesome tinge of scepticism. He must try to make good his way as he goes and decline to be hurried along in an excited rush over ground that is at best but very insecure. He must often pause to steady his mind and question himself as to the "what" and "how" and "why." The "what" is briefly this: It is well known that certain currents of high frequency (500,000 to 1,000,000 or more alternations a second), strong enough to light lamps which with ordinary frequency require currents that are dangerous to life, may be passed through the human body without producing any very appreciable effect in the way of sensation or neuro-muscular phenomena in the shape of contraction. M. d'Arsonval, who more than anyone else has experimented in this direction, states further: (1) that tissues traversed by such currents become rapidly less excitable and that an analgesia lasting from one to twenty minutes

is produced at the point of penetration; (2) that the vaso-motor system is strongly influenced, as is shown by the fall in blood pressure registered by the manometer in the carotid of a dog or by the Marey sphygmograph in man; (3) that on the continued application of these currents the skin becomes vascular and perspiration follows; (4) that animals submitted to the action of such currents show an increase in the respiratory combustions, as seen by examining definite quantities of blood by the usual physiological methods; (5) that they have an influence on certain micro-organisms as shown by their action on the pyocyanic bacillus (decolouration of blue pus); (6) that the body may be submitted to the action of such currents either by passing them directly through the tissues or placing the tissues or the whole body in the interior of a solenoid (without contact with it). This latter method he calls "auto-conduction." In connexion with these observations he mentions two hypotheses: (1) that the current on account of its enormous frequency passes by the surface of the body, as such currents are known to do with other conductors, and (2) that the sensitive and motor nerves are so organised as to respond only to vibrations of a definite frequency, in the same way that the terminations of the optic nerve are "blind" for undulations of the ether of a period less than 497 billions per second (red) or more than 728 billions per second (violet). He rejects the surface theory so far as the animal body is concerned, and though he passed currents of 3000 milliampères he explains their harmlessness by "absence" of excitation, or rather on the hypothesis that these currents exercise on nervous centres and muscles an inhibitory action of the kind studied by Dr. Brown-Séquard, and he considers that this inhibitory action is shown by some of the phenomena above described. In this country the harmlessness of such currents is generally explained by the fact that there is virtually no current strength (ampèrage). In THE LANCET of Dec. 24th, 1892, I detailed some experiments with comparatively low frequency currents which seemed to point in this direction. In the *Electrical Review* it was pointed out that in all high frequency experiments the current strength is probably very small owing to its being "whittled down" by the various transformations to which it had been subjected. In the *Philosophical Magazine* of February, 1893, Mr. Campbell Swinton offered an explanation of the lamp experiment which is now well known, which has been freely reproduced both in the medical and lay press, and which is now, I think, the explanation most generally accepted. Attempts to form an opinion on such points may be assisted by reasoning of the following kind: Since efficiency varies with the square of the frequency, and since currents of high frequency must have high voltage for conducting the current, it follows that to obtain an exceedingly small current of high pressure and high frequency great power is required to produce it. Supposing that a current whose initial energy is as large as 2 ampères at 200 volts—i.e., about half an electrical horse-power—is transformed up to 100,000 volts, the resulting current strength (ampèrage) cannot be more than 0·004 ampère (4 milliampères). Now, if instead of arguing from the initial energy one begins at the other end and takes the amount of work done at the terminals as the basis of reasoning, it occurs to me that a better and more definite point of departure is obtained. What is the actual work done by a current of this kind as it escapes from further manipulation at the terminals of the high frequency coil? I place a 5 candle lamp, which on ordinary circuit glows bright-red with 250 milliampères at 10 volts, between the terminals of the apparatus described in the footnote[1] and find that here also it is brought to the same degree of redness. I then substitute my body for the lamp by holding in my hand two copper cylinders. On turning on the current no muscular contraction or sensation beyond a slight warming effect under the electrodes is perceived. After breaking circuit there is perhaps a slight deadening of the ordinary cutaneous sensibility over the same area. Using a half-crown as an electrode on the forearm, there are no effects beyond the above; using a shilling in the same way, there is a slight pricking effect; with a sixpenny piece this becomes more marked and with a threepenny piece painful. I am, therefore, in possession of two facts. In the first place I have applied to my body, through the area of a threepenny piece, a current which would bring to a red glow a lamp requiring with a low potential current circuit 250 milliampères and 10 volts (2·5 Watts). Was I, therefore, passing such a current through my body? Taking my body out of circuit, I approximate the terminals until within sparking distance of each other. This distance measures one centimetre. Turning to De La Rue and Muller's sparking table I find that such a spark-gap requires a pressure of 9000 volts to overcome it. But the total energy required to glow the lamp is 2·5 Watts; therefore the current strength will fall short of 3 milliampères. If an experimenter, therefore, states that by such an apparatus he has passed 3 ampères (3000 milliampères) through a man's body, may I, assuming that his spark-gap was not less than 1 centimetre, representing 9000 volts, conclude that he considers he has passed through the living body a total energy of 27,000 Watts, or 36 electrical horse-power? The second point which this experiment shows me is that painlessness must depend largely on concentration of current (density). It is absent when spread over the area of a half-crown and present when concentrated through a threepenny piece; mere rapidity of alternation will not therefore *per se* make a current painless. Rapidity will transform and minimise current strength (ampèrage), but when such current strength is concentrated through a sufficiently small electrode (represented in an extreme form by a spark?) it becomes painful. Apart, however, from the physics of the current itself there is that of the conductor—i.e., the body—also to consider—firstly, that ever-varying quantity, resistance, mainly determined, as is known, by the condition of the skin and changing as the skin happens to be dry or damp. The above considerations, looked at collectively, seem to me to point to the probability: (1) that currents of high frequency and potential owe their "harmlessness" mainly to their small current strength, but that the resistance of the body certainly, and the independent conductivity of its surface fluid possibly, as well as other conditions, may play an important part in explaining the occasional harmlessness of currents of ordinary frequency and admittedly large current strength; (2) that sensation and muscular contraction are influenced by the frequency of the alternation, the extent of changes of potential, and the suddenness (brusqueness) with which that change is made—i.e., by the shape of the electrical curve of which these three are factors—three factors whose effective action is determined also by the degree of current strength and its concentration on a given area.

Brighton.

[1] Large "Apps' coil" with ordinary vibrating contact breaker supplied with current from a C.C. light circuit at 100 volts. With a R. of 9·5 ohms in circuit the ampèremeter registered 6 ampères and the secondary terminals gave a spark of 22 C.M. The total initial energy, therefore, equals 300 Watts, or, calculating for loss in coil, 225 Watts. The terminals of the secondary of the coil were connected one with the inside and the other with the outside coating of two Leyden jars. The discharge of these across an air gap of 8 millimetres excited the primary of a high frequency coil, the primary consisting of ten turns of No. 10 B. W. G., the secondary (placed within the former) of 100 turns of No. 26 B. W. G. immersed in oil, each turn having a diameter of ¼ in. The secondary gave at its terminals a discharge spark of 1 C. M.

A CASE OF

TYPHOID FEVER FOLLOWED BY SEPTICÆMIA, IN WHICH RECOVERY TOOK PLACE AFTER THE INHALATION OF OXYGEN GAS.

BY ARTHUR MASON, M.R.C.S. ENG., L.R.C.P. LOND.

A DOMESTIC SERVANT aged twenty-two contracted typhoid fever whilst away for her annual holiday. The course of the fever was normal and, on the whole, distinctly favourable until Oct. 2nd, before which date the temperature had fallen for three or four days and she had begun to take a small amount of solid food in the shape of custard pudding. On that day the temperature rose to 102° F. and the patient complained of much pain in the left thigh, which was tender to the touch at the upper part, but showed no signs of any definite trouble. A hot fomentation was ordered and it was kept constantly applied, but on the two succeeding days the temperature continued to rise slowly and the glands of the groin on the left side became enlarged and painful, whilst there was much deep-seated tenderness in Scarpa's space, and considerable swelling in the upper third of the thigh. This was accompanied by sickness which, in spite of treatment, became more and more severe, till on Oct. 4th there was almost uncontrollable vomiting, only small quantities of iced cham-

pagne being retained, when recourse was had to rectal feeding. On Oct. 5th the temperature was 105° at 12 noon, being 103° in the evening. The general condition of the patient was much graver, the pulse being 140 and the respiration 60. The local trouble was somewhat improved; there was no trace of lung complication, but a few scattered coarse rales were heard over the chest. The tongue was very dry and leathery. She complained much of thirst and took champagne freely. The sickness had stopped. On Oct. 6th the temperature was 103°, rising to 104·6° in the evening. The swelling in the thigh had much diminished and there was hardly any pain or tenderness. The breath was indescribably offensive and the tongue was very dry. The patient rambled a good deal in her sleep, and when awake her mental condition generally was peculiar; but she could be roused for short intervals by a question. On Oct. 7th the temperature rose at 8 A.M. to 106°, being accompanied by a severe rigor; it slowly fell during the course of the next twenty-four hours to 101·4°, there being profuse perspiration. She took nothing by the mouth but champagne; the rectal feeding was continued, the injections being well retained. The pulse was 160. On the morning of Oct. 9th another rigor occurred, the temperature rising to 105°; but in the course of the day it fell to 100·4°. On Oct. 10th, after an unusually severe rigor, the temperature rose to 106·6° in the morning, as taken in the axilla, falling three degrees during the day. The condition of the patient was apparently hopeless, the pulse being 172 and the respiration 84 and extremely shallow. The colour of the face was pale and livid, with a slightly jaundiced appearance of the skin and conjunctivæ. Inhalation of oxygen was tried at 9 P.M., about half a gallon being administered slowly in the course of twenty minutes. The pulse fell 30 beats during the administration and gained in strength, and the colour of the lips and finger tips underwent a distinct improvement. The administration was repeated at 2·30 A.M. on Oct. 11th, the same quantity being again given. This was followed by the expectoration of a little bright blood-stained mucus. Shortly after the second inhalation a critical diarrhœa set in, and in the succeeding twenty-four hours the patient passed eleven stools of a semi-solid, black and horribly fetid character. The temperature was 101·4° and the respiration was 72. On Oct. 12th the temperature fell to normal in the course of the day, and from this point nothing worthy of note interfered with the progress of a rapid and satisfactory convalescence with the exception of a good deal of swelling of the left leg when the patient began to move about and which had not entirely disappeared on Dec. 1st, 1892.

Remarks.—I have never yet heard of the employment of oxygen under the conditions above detailed, and it suggested itself to me mainly on the ground of the exceedingly livid colour of the patient and the rapidity of the breathing. One naturally hesitates to say how far the recovery was due to the remedy used and how far to youth and its natural elasticity; but as far as I could judge it certainly seemed to be the turning point of the case. The patient was apparently dying of a profound toxæmia and the oxygen supplied the stimulus required to throw off the poison. Under similar conditions I believe that arterial transfusion has been a suggested, if not an adopted, remedy. The above case seems to me to show that the inhalation of oxygen is a possible therapeutic agent worthy of trial in cases of blood-poisoning, and certainly simple in its application. I should like to be permitted to add my sense of the devotion and ready self-sacrifice shown by the nurse who was associated with me in this most exacting case.

Walton-on Thames.

EXTENSIVE PEMPHIGUS IN ACUTE RHEUMATISM.

BY R. A. BAYLISS, M.R.C.S. ENG., L.R.C.P. LOND.,
HOUSE SURGEON, ROYAL ISLE OF WIGHT INFIRMARY AND COUNTY HOSPITAL.

A SLIM-LOOKING lad aged sixteen was admitted into hospital on May 31st, complaining of pain in the joints of the wrists and fingers, which were red and swollen. There was no pain or swelling in any other of his joints. The temperature was 102° F. The tongue was coated with thick, white fur. A well-marked mitral systolic murmur could be heard over the heart's apex. The urine (specific gravity 1020) contained no albumen. He continued in about the same state, his temperature not rising above 100°, until June 3rd, when some large bullæ with red inflamed bases appeared around his lips and a few smaller ones on his forehead. In the course of the next few days successive crops appeared, first on the neck, where the bullæ, which were nearly as large as pigeon's eggs, formed a sort of necklace and were very painful and caused him great inconvenience. They afterwards appeared on his back, which was almost completely covered with bullæ of various sizes, on his chest, especially at the sides, and his arms, and around his wrists. The legs were less markedly affected, but there were some fairly large blisters around the ankle-joints. After a few days the bullæ burst, leaving behind a raw surface, which, in the case of his back, where the eruption had been so confluent, was very extensive in area. Scabs subsequently formed, which eventually separated, leaving the skin in the affected regions sound again. During these processes, which lasted till about June 20th, his evening temperature was about 100°. He was out of bed for the first time on June 30th, and left the hospital convalescent, though very anæmic, and with the cardiac bruit still audible on July 12th.

With regard to treatment, he at first had salicylate of soda with ammonia given him, and on the appearance of the pemphigus he had quinine in combination with arsenic, and latterly iodide of potassium. When the bullæ were at their height and were painful the patient was enveloped in cotton wool, which was replaced by lint with zinc ointment spread on it when the raw surfaces formed.

The above case appears to me to be of interest on account of the occurrence of the eruption in the course of an undoubted attack of acute rheumatism (as was evidenced by the initial joint symptoms and cardiac complication), and also on account of the extensive area of the skin it invaded, covering fully one-third, I should say, of the surface of the whole body.

Ryde, Isle of Wight.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.* lib. iv. Proœmium.

CHARING-CROSS HOSPITAL.

SUPPURATION IN BOTH EARS; LEFT TEMPORO-SPHENOIDAL ABSCESS; TREPHINING; EXTENSION OF ABSCESS; DEATH

(Under the care of Mr. JOHN H. MORGAN.)

THIS case was throughout its course most interesting and obscure. The sudden onset of coma in the first instance gave no indication as to its cause until the somewhat obscure history of the former ear trouble had been obtained from the mother. No rigors were noticed and with disease existing in both ears there was the difficulty of determining upon which side of the brain the mischief was taking place. The only indications in this regard were the occasional tenderness on tapping the left side of the head above the mastoid, the occasional complaint of pain in that region and the earlier onset of optic neuritis on the left side. The value of the spot indicated by Mr. Dean was fully borne out, as by it an examination of the temporo-sphenoidal area, the cerebellum and the lateral sinus was perfectly feasible, and it was the more valuable in this instance from the absence of any indication whatever as to the definite seat of the mischief. As it was the abscess was soon discovered and a considerable amount of pus was evacuated and proportionate relief was obtained. This, however, was not prolonged, and the continuance of symptoms gave rise to doubt as to whether an abscess did not also exist upon the opposite side, where the ear was even more diseased than on the left side. The event proved that this was not the case, and by the light of the post-mortem examination the question arises whether the cavity might not have been evacuated by more extensive drainage or whether the pus was so confined by the shape of the abscess cavity that it could by no means have been entirely drained. The absence of any discharge upon the dressings and the free

manner in which the cavity could at each dressing be syringed out were misleading as regards these points, whilst the result of a free insertion of a bistoury at a later date was negative. For the following notes we are indebted to the registrar, Mr. A. T. Collum.

A domestic servant aged eighteen was admitted under the care of Dr. Mitchell Bruce in a state of semi-consciousness. The face was blanched and the mucous membranes were pale; the respiration was slow, regular, and not gasping; the pulse was 60, small, soft and regular; the pupils were equal and reacted to light; the abdomen was flaccid and not tender; there was no hæmorrhage from any orifice; the temperature was 97·8° F. It appeared that she had arrived the night before at a house where she had been engaged as housemaid and that after having had a hearty meal she had retired to bed, where she lapsed into a drowsy condition and her master sent for a medical man, who advised that she should be sent to a hospital. The mother stated that the girl had always been delicate. One brother had died and she had lost three sisters from convulsions; four sisters were alive and healthy. Eight years ago she had scarlet fever and three years since deafness in the right ear followed a cold and later the left ear was affected. She frequently cried out at night from pain in both ears and had received some benefit from treatment of the right ear. Three weeks before admission there was a sudden discharge of blood and pus from both ears and they were syringed. At this period it was noticed that "she seemed queer in the head and talked nonsense" and for the last fortnight she had frequently vomited after taking food. On the day following her admission, Feb. 10th, she was more sensible, but was very deaf, and when not spoken to she lay very quietly, taking no notice of those around her. She vomited once during the night, giving warning beforehand that she was about to do so. The urine contained a trace of albumen. The pulse was slightly irregular; there was no facial or ocular paralysis. There was distinct photophobia, the brows knitting when a light was before her; the discs of both eyes were blurred, but there was no fulness of vessels. Both ears were full of pus and there was a perforation in the right membrana tympani; the speech was slow, but cerebration was perfect. During the next few days the right pupil was noticed to be slightly smaller than the left; both reacted to light, but there was still photophobia. There were frontal headache and pain in the left temporal region, but no œdema, and she had two attacks of vomiting in one evening. These symptoms passed off and she became much better, sitting up and conversing with other patients. On March 1st she complained of severe headache and vomited once. The eyes were again examined and in the left several linear hæmorrhages were seen, radiating from the nasal side of the disc. No other abnormal condition was observed and the right disc was perfectly normal. On the 6th she complained of headache; the photophobia was marked. She vomited three times during the day and refused food. The average temperature was subnormal, the maximum being 99·2° and the minimum 96·8°. During the next few days the vomiting continued; she lay curled up, shielding her eyes from the light and resenting all interference. She answered questions rationally and complained of general pain in the head, but no local tenderness was found nor was there any other external symptom. The eyes were examined by Dr. Mott, who found well-marked double optic neuritis with three dioptres of swelling, the discs having irregular edges. No hæmorrhages were seen. Consultations were held by Dr. Mitchell Bruce and Mr. Morgan and their colleagues, and the diagnosis between an abscess in the brain or of the cerebellum and a general meningitis was discussed. On the one hand there was a profuse discharge from the right ear, which had been first diseased; and on the other hand there was but little discharge from the left ear, which had much more recently been affected. The fact, however, that the neuritis had been observed first in the left eye and that she had on one or two occasions complained of pain above the left mastoid region determined Mr. Morgan to make an exploration. The patient was placed on the operating table on March 11th and chloroform was administered without previous injection of morphia. There being no indication whether an abscess, if present, was to be sought for in the temporo-sphenoidal lobe or in the cerebellum, advantage was taken of the suggestion of Mr. Dean to expose both these parts as well as the lateral sinus by means of a single trephine opening. A steel pin was therefore pushed through the scalp to mark the bone at a point one inch and a quarter behind the external auditory meatus and a quarter of an inch above Reid's base line. A flap was then turned down, which included all the superficial structures and the insertion of the sterno-mastoid in the superior curved line. The periosteum was raised by means of a raspatory; the occipital artery was divided and secured. A trephine of three-quarters of an inch in diameter was then applied, the pin being inserted at the spot previously marked, and a circle of bone, which was thicker than usual, was elevated. By this means there was exposed the lateral sinus, running across the trephine opening just above its middle; below and above this were to be seen depressed areas of dura mater corresponding to the convolutions of the cerebellum and of the temporo-sphenoidal lobe. The layer of dura mater forming the outer wall of the lateral sinus showed the dark blood in it. A small mastoid vein entering the sinus had been torn across in removing the bone and bled freely, thus indicating that the contents of the sinus were fluid and normal. The dura mater above and below the sinus appeared to be natural, pulsating and showing no signs of inflammation; whilst if any bulging existed it must have been very slight, since some of those present were of opinion that the temporo-sphenoidal lobe and others that the cerebellum showed signs of increased internal pressure. Without incising the dura mater a small aspirator needle was pushed into the tempero-sphenoidal lobe in a direction downwards, forwards and inwards. As no pus was withdrawn the needle was again thrust through the same opening in the dura mater and pushed directly inwards, and on its withdrawal a bead of pus was found in its eye. A full-sized needle was then introduced through the same opening and pus was evacuated freely. The trephine opening was next enlarged upwards by means of forceps to the extent of half an inch; at the same time the bleeding from the vein entering the lateral sinus which had been opened was checked by the application of hot water. The dura mater was then incised and a pair of sinus forceps were pushed into the abscess along the side of the needle. This was then withdrawn and the blades of the forceps were opened, when more than an ounce of pus of a greenish-yellow colour—as thick as cream and emitting a very offensive odour—escaped. A medium-sized drainage-tube of rubber was passed into the abscess cavity to the depth of more than an inch, and through this the abscess was frequently washed out with warm boracic lotion, no alteration in the patient's condition being noticed. The flap was laid down and attached by several interrupted stitches, a cut being made on one side of the flap and the tube sunk into this so that the drainage should be in one direct line without any kink in the tube, which was secured by means of a stitch. The ear was well syringed out with perchloride of mercury lotion, and the whole was covered by a dressing of sal alembroth; the patient made a speedy recovery from the anæsthetic and did not vomit; she regained consciousness perfectly and was comfortable except for severe attacks of frontal headache and photophobia. The pulse was 80 and irregular, as before. She was better on the following day. She had slept well during the night and had lost her photophobia. In the evening she became excited and vomited; this was, however, probably due to the injudicious kindness of friends. On the third day she was quiet and sensible. The temperature was 99·4° and the pulse was 80 (irregular). She complained of diplopia and had a left internal strabismus. The wound was dressed on the third, fourth and fifth days, but there was no discharge of pus on the dressing. The drainage-tube was removed, cleaned and replaced; its lumen was not blocked when *in situ* and boracic lotion was syringed through it. After the second dressing the temperature rose, and she became partially unconscious and delirious. On the seventh day the wound was dressed and some serum escaped but no pus. The temperature rose to 102·2°, but fell again to 99°. She grew irritable and vomited twice, but was not unconscious. During the next four days she was quiet and comfortable, and was free from headache. There was no discharge from the wound. On the fourteenth day the temperature rose to 102·4°, and there was a decided change in her disposition. The edges of the wound were healed soundly but the flap was puffy, and a tenotome was inserted, but as no pus was evacuated the presence of a hernia cerebri seemed to be probable. At the same time the discharge from the right ear, which had been in abeyance, became profuse. These conditions remained until March 30th, but on April 1st she became almost totally unconscious. There was no vomiting, but there was strabismus as before. There was no

rigidity or paralysis of the limbs. On April 2nd the pupils were unequal. The right arm was very quiet but it was drawn up if pinched hard; the left arm was quite sensitive and was frequently moved. The right leg was quite paralysed and did not move when stimulated; the left leg was drawn up if pinched firmly. The knee-jerks were absent. The temperature rose steadily, varying daily between 100° and 103°. Except for short intervals she remained quite unconscious, with the same amount of paralysis, and died on April 3rd, twenty-four days after the operation.

Post-mortem examination.—A small hernia cerebri projected through the opening in the bone and prevented all drainage. The surface of the convolutions was not noticeably flattened and there was no general meningitis. On slicing the brain down to the temporo-sphenoidal lobe two collections of pus were found, the larger one occupying the greater part of the lobe and reaching forward to the apex, the smaller one being above, behind, and internal to the first. Both contained thick yellowish-green pus, the larger cavity being lined with a thick wall of lymph. The cavities were close together and may have been separate from one another, but on examination the much-softened brain matter separating them was so easily broken down on manipulation that it was impossible to make out whether there was one branched abscess or two separate ones. The internal capsule was softened and pressed upon, forming the inner boundary of the abscess cavity. No abscess existed in any other part of the brain and there was no definite meningitis at the base. Both sixth nerves had been compressed and flattened against the pons. On stripping off the dura mater there was found to be a tiny carious spot on the anterior surface of the left petrous bone at the roof of the tympanum. Both middle ears were full of pus and granulations, the left one being most disorganised. The ossicles remained *in situ*.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, PLYMOUTH.

STRANGULATED RIGHT FEMORAL HERNIA; HERNIOTOMY; PROLAPSE OF GUT AND REDUCTION; LAPAROTOMY; RECOVERY.

(Under the care of Mr. LUCY.)

THE following case presents many points of interest, as follows:—1. Recovery at the advanced age of the patient—viz., eighty years. 2. The extraordinary tenuity of the hernial sac, which was due, no doubt, to its recent formation. 3. The occurrence of three strangulations, preceded by well-marked collapse and vomiting. 4. The implication of small bowel at the first operation, of large intestine at the second operation and of small gut again at the laparotomy. 5. The peculiarity of the strangulating band at the third operation, where a pocket was found beneath a peritoneal fold; as time was valuable no prolonged examination was made, but it did not appear to be any of the various forms of band or fossa described by Mr. Treves in his work on "Intestinal Obstruction." 6. The occurrence of prolonged cystitis, dating from May 15th (the seventh day) favours the view that the right lateral false ligament of the bladder was stretched and that the organ was so prevented from being completely emptied. It is probable that the right broad ligament of the uterus formed the posterior wall of the fossa, though for the reasons stated above this was not ascertained. For the notes of this case we are indebted to Mr. R. Stanley Thomas, house surgeon.

A widow aged eighty was admitted at 3 P.M. on May 9th with a strangulated right femoral hernia, of about twenty hours' duration, which was accompanied by the usual symptoms. There had been a reducible femoral hernia on the left side for many years. The present hernia had appeared as the result of carrying a pail of water the day before admission. At 5 P.M., under the influence of ether, the sac was found to be like tissue paper, and it contained a small quantity of colourless fluid and the usual knuckle of purple but shining intestine. This proved to be the small intestine and it was returned well within the abdominal cavity after a nick had been made in Gimbernat's ligament. The wound was sutured with silkworm gut through the skin only and a firm spica bandage was applied over the dressings. The patient vomited several times after the operation, but passed a good night; she did not pass any flatus. At 7 A.M. on the third day after the operation she had a violent fit of coughing and complained of pain and great tenderness in the abdomen; there was no distension. As the symptoms did not improve the wound was exposed at 11.30 A.M. and was found to bulge. The stitches were removed under the influence of chloroform and ether, and a coil of somewhat congested large intestine was reduced. A silkworm gut suture was passed through the edge of Gimbernat's ligament, and the deep crural arch and the skin edges were reunited. After this procedure the patient passed flatus freely per rectum. On the fourth day there was retching but no sickness; there was occasional cough with free expectoration. On the fifth day she suffered from spasms of colic occasionally. The wound was dressed; it was found to be looking well. On the seventh day the patient complained of pain on micturition; the urine was alkaline and contained much mucus. On the eighth day she commenced to vomit at 7 A.M. and complained of great abdominal pain, which was referred especially to the left groin, where a small swelling—probably the sac of the old hernia—could be felt; it was very tender. On the thirteenth day there had been no sickness for seventy-two hours. On the fourteenth day pain in the abdomen and distension commenced. On the fifteenth day the patient stated that she had had great pain during the night. There were tenderness of the left femoral region and considerable tympanites. On May 24th, the sixteenth day after the operation, the patient vomited at 2 A.M. and 5 A.M. No flatus was passed and the abdomen was uniformly distended. At 3.30 P.M. a mixture of chloroform and ether was given by Mr. Tyrrell's method. As an injection of water by gravitation proved ineffectual, the abdomen was rapidly opened in the middle line between the umbilicus and pubes, and a coil of distended small gut presented, floating in a large quantity of clear brown fluid; the abdominal rings were examined and were found to be empty. The seat of obstruction was obviously at the brim of the pelvis and a tense peritoneal band was felt, passing from the lower end of the cæcum towards the pubes, pinning down a loop of gut. This must have been the lateral false ligament of the bladder, continuous with the lower end of the meso-cæcum. The coil of gut previously referred to was rapidly "paid" upwards into the general cavity and finally the obstructed portion was reached. Gentle traction released a loop of small bowel, this being followed by an audible rush of flatus and fluid. The flanks and Douglas's pouch were sponged and were found to be dry, and the parietes were united with silkworm gut. The operation lasted for sixteen minutes and was well borne by the patient. On the third day after the above procedure was undertaken there was no pain and there had been no sickness since the operation. The wound was found to be quiet; the bowels were opened slightly. On the eighth day all the stitches were removed and a dry dressing was applied. The bowels were opened after an enema. The patient was able to be on a couch on the twenty-first day and left the hospital (wearing an abdominal belt) for a convalescent home six weeks after the laparotomy.

Reviews and Notices of Books.

The Physics of the Cranial Circulation and the Pathology of Headache, Epilepsy and Mental Depression. By A. HAIG, M.A., M.D. Oxon., F.R.C.P. Reprinted from *Brain*. London: John Bale and Sons.

DR. HAIG'S views on the influence of uric acid in the system are now well known to the profession. The author has himself been a sufferer from one of the conditions treated of—namely, migraine. Such a fact no doubt is to some extent an advantage, for some of the most permanent possessions of the race have been bought at the price of personal suffering. On the other hand it is, perhaps, apt to cause writers to attach an importance somewhat in excess of that which is its due to the factor enlarged upon. The "panacea" in therapeutics and the "key" in pathological conditions are both apt under these circumstances to have a *rôle* assigned them which they usually fail to play so satisfactorily as their advocates would lead us to expect. Having said so much, however, by way of caution as regards our acquiescence in all Dr. Haig's conclusions we have nothing but praise to

offer for the careful and thoughtful manner in which he has elaborated his thesis. He formulates the rule that "the urinary water is from hour to hour or from day to day inversely as the uric acid excreted along with it." Regarding also the excretion of urate as a measure of the urates in the blood he agrees with those who attribute to this factor various conditions of vascular tension. Dr. King Chambers regarded vascular tension as due to the presence of waste products in the blood and treated the condition dietetically, as Dr. Haig has also done. Dr. Haig seems to have particularised Dr. Chambers' general statement and to regard "uric acidæmia" as the essential factor in the mechanical disturbances of the circulation to be found in the conditions he describes. His contribution is a careful physiological and clinical study well worthy of perusal.

Tooth Extraction: a Manual on the Proper Mode of Extracting Teeth. By JOHN GORAM, M.R.C.S. London: H. K. Lewis. 1893.

THIS *brochure* is evidently intended for those general practitioners who are called upon to extract teeth rather than for the dental student. Many useful rules are formulated clearly and concisely, such as the most desirable direction in which to apply the force in the case of each tooth and some of the rules are also arranged in a convenient tabular form. The chapter on the lever forces in extracting teeth is well worth perusal. There are, however, many views expressed that will meet with hostile criticism. First, with regard to the use of the key. The author recommends the employment of this barbarous instrument—truly only as a last resource; but we thought its use had long since died out, and certainly it is only to be found in the museums of dental hospitals amongst the antiquities. The "hawksbill" forceps for the removal of lower molars, possessing as it does the advantages of great power and non-obstruction to the view of the tooth, is doubtless the form most commonly used; but Mr. Goram merely makes mention of it, preferring the forceps with laterally arranged blades. The absence of any illustrations of forceps is, we think, a serious omission, as such illustrations are likely to convey to the reader far more than any word picture. We think also some remarks with reference to the casualties that may arise during the operation of extraction should be added; and much more ought to be said about the treatment of hæmorrhage.

Lectures to Plumbers. By J. WRIGHT CLARKE, Plumber Lecturer on Technical and Instructor in Practical Plumbing at the Polytechnic, London. London: R. J. Bush, 1893.

THE contents of this volume were originally delivered as lectures to students of various plumbing and building construction classes, to architectural and engineering students at the Polytechnic, London, and to sanitary officers at the Sanitary Institute. Receiving his own early training in the old school of plumbing, the method of which consisted essentially in allowing the apprentice to pick up whatever crumbs and scraps of information fell in his way, without any attempt on the part of his master to systematically instruct him in his trade, Mr. Clarke quickly became alive to the shortcomings of such a plan. He would like to see both apprentices and masters striving not only to attain to a mere manual dexterity in their work, but to be also students of their subject, capable of appreciating the scientific principles upon which their work is based, and willing only to pursue their avocation under the guidance of science. With such a widening of requirements it becomes no longer possible for the plumber to remain content with the information to be gleaned in the workshop; he must make himself also conversant with elementary chemistry, physics and mathematics. The author, therefore, before passing to the purely technical portion of his work, devotes his earlier lectures to the consideration of the chemical and physical properties of the bodies which the plumber is handling in his daily work to the manipulation of metals and to geometry as applied to plumbing. A chapter is devoted to the setting out of plumbers' work, mainly with the object of impressing upon the apprentice the necessity of always planning out his work before embarking upon it, so that he may know not only what he has to do, but how he is going to accomplish this task and thus save himself from falling into blunders. The lectures dealing with the application of lead work on roofs of buildings are models of simplicity combined with thoroughness of treatment. In describing drainage apparatus, although Mr. Clarke is careful not to omit any trap, pipe or appliance which has been found by experience to yield good results, he is equally mindful to avoid advocating the claims of this or that maker, or insisting upon the pre-eminent charms of a single model. An exhaustive account is given of the methods of testing drains and numerous examples are given, showing the futility of placing confidence in cursory examinations or in any one method. The water and smoke methods are those most commended by the author; but even the latter plan he is accustomed to repeat several times before pronouncing a final opinion on the security of a drain. The volume is enriched with a great number of illustrations, which enhance the merits of the work.

La Comtesse de Chambrun: ses Poésies. Paris: Calmann Lévy. 1893.

RARELY does French literature produce a publication so pure in its essence, so delicately refined in its language, as these posthumous poems of the Comtesse de Chambrun. In a few touching sentences, addressed from the Montmartre Cemetery to Marie-Jeanne de Chambrun, M. Émile Ollivier describes for us what manner of woman the deceased lady was. Born socially "in the purple," and possessed of ample means, she lived in thought and deed for others; and by her self-sacrificing life realised in herself an ideal more truly and finely "poetical" than the happiest of the effusions she wrote under that name. Goethe has shown us how supremely selfish art may become, but in the devotedly artistic life, here so exquisitely traced by M. Émile Ollivier, we have an example of how intensely humanitarian may be its spirit, with what love of one's fellow-man it may coexist, nay, how it may develop in nobility and in finish under the inspiration which that love alone can impart. In the pathetic motto he has taken from the Italian poet—

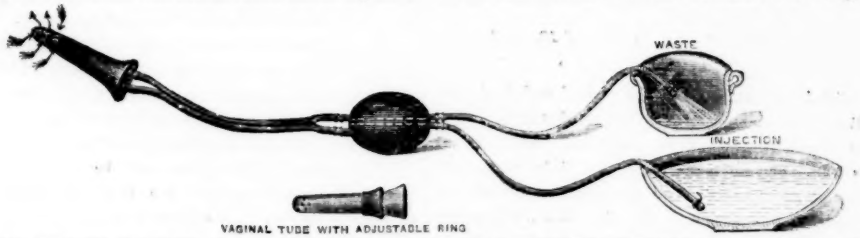
> "Non la conobbe il mondo, mentre l'ebbe,
> Conobil 'io, ch 'a pianger qui rimasi"

(the world knew her not whilst it possessed her; I knew her—I who have remained here to weep)—we read the justification of the present volume; to let humanity know the "angel it was entertaining unawares," one whose written thoughts were but the reflex—the imperfect reflex—of the life that "did good by stealth" and shrank from the fame it should have brought. Into any analysis of the poems we must forbear to enter, holding it sufficient to recommend them to those of our readers who have leisure to enjoy such *spirituel* effusions as that entitled "Venise" (p. 147), or "J'avais un Nid" (p. 152), or "A Wildbad" (p. 158). Perhaps the "Proverbe" (p. 248) might have been omitted as wanting in character and strength, but, on the whole, the volume amply redeems the promise of its editor. A word as to the publisher's part in it. The paper and type are quite *de luxe* and the photogravures which illustrate it are second only to the *chefs-d'œuvre* from which they are taken.

New Inventions.

THE "VONDA" VAGINAL SYRINGE.

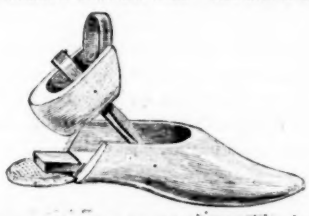
THE accompanying illustration represents a new vaginal syringe, called the "Vonda," just introduced to the notice of the profession by Messrs. J. G. Ingram and Son, Hackney Wick, E. It is constructed with double tubes, one for injection and the other for waste, the valves in the tubes on one side opening in a direction opposite to those on the other side, and the bulb and vaginal tube being each divided into two compartments. The following appear to be its chief advantages: It is double-acting, douche and suction taking place alternately and water being first injected into the vagina and then withdrawn by suction. This alternate action can be kept up continuously and as long as desired, without withdrawing the vaginal tube. The suction is capable of removing all morbid secretions and of cleansing the parts. The widened end of the vaginal tube plugs the entrance to the vagina, so that an astringent or caustic injection can be held in contact with the walls of the vagina and neck of the uterus as long as may be desirable. The instrument also distends the folds of the vagina sufficiently to ensure the application of the medicament employed to all parts of the canal. The same water is never used twice. A rubber ring, for use in cases of prolapsus uteri, slips over the vaginal tube and can be adjusted so as to shorten the tube in proportion to the distance the uterus has slipped down. Syringes on the same principle of alternate douche and suction are made for washing out the stomach.



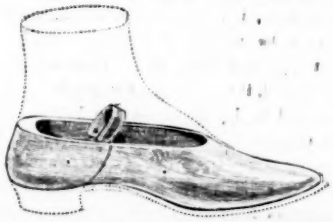
VAGINAL TUBE WITH ADJUSTABLE RING

A NEW BOOT DRIER AND WARMER.

MESSRS. E. & W. BELDAN, 167, Great Dover-street, S.E., have constructed an addition to the ordinary boot-tree which by a simple device ensures the equitable heating and drying of the boot whilst it is on the tree. The tree is hollowed out



and the necessary heating is obtained by inserting a small piece of metal, previously heated by a spirit lamp, in the hollow part. A thick sock of an absorbent material is let



into the bottom of the tree. This arrangement secures the thorough warming of the boot and maintains at the same time its proper shape, whilst the leather is not liable to be injured by direct heat.

ANNUAL REPORT OF THE LOCAL GOVERNMENT BOARD FOR IRELAND.

FROM the twenty-first annual report now issued it appears that there has been a further decline in the average daily number of persons relieved in the workhouses, whilst there has also been a decrease in the average daily number of persons who received out-door relief. The average daily number in the workhouses was 40,454 and of those in receipt of out-door relief 59,137, the latter forming a percentage of 1·27 on the average daily number of the population. The numbers for the previous year were 40,742 and 62,229 respectively, or a total decrease of 3480. During the year ended March 4th last the total number of deaths in the various workhouses was 9531, showing a decrease of 1356 as compared with the number for the preceding year. Of these phthisis caused 1139 deaths, against 1171; lung disease 1707 deaths, against 2208; fever 307 deaths, against 337; heart disease 565 deaths, against 598; brain disease 357 deaths, against 363; cancer 231 deaths, against 222. There were for the twelve months ended Sept. 29th last 52,601 persons admitted into the workhouses for illness, being an increase of 4976 as contrasted with the previous year. In the various dispensary districts the medical officers attended 400,858 new cases at the dispensaries and 187,500 at their own homes and gave certificates for 1938 dangerous lunatics. The vaccination returns show a decrease, of 4493. The presence of Asiatic cholera on the Continent rendered necessary the issue of orders prohibiting the importation of rags, filthy bedding and clothing from certain foreign countries and infected ports. In addition to circulars advising sanitary authorities as to the precautionary measures to be adopted in view of the possible extension of cholera to the United Kingdom, the Board's medical inspectors had visited their districts and had conferred with sanitary authorities with the object of completing arrangements deemed essential for meeting the threatened dangers. Plans and specifications for cholera huts were also prepared of an inexpensive character, designed to meet any local emergency calling for additional temporary accommodation; while the Cholera Hospitals (Ireland) Bill recently passed confers upon local authorities in Ireland additional powers for obtaining sites for cholera hospitals. The Board are of opinion that the manner in which the provisions of the Public Health Act have been carried out has placed the country in a better position than at any former time for resisting the extension of this formidable disease. The medical charities expenditure amounted to £164,538, under which heading is included the cost of medicines and medical appliances (£28,161), salaries of medical officers and apothecaries (£95,057), vaccination fees and other expenses (£9815), showing a decrease of £1792 as compared with that of the previous year. The Board sanctioned loans amounting to £168,535 to various towns in Ireland, principally for sewerage and water-supply, which, added to previous sums allocated, constitute a total of £2,441,838 for the eighteen years ended March 31st, 1893. The total number of lunatics, epileptic lunatics, idiots, and epileptic idiots in workhouses on the last day in December was 4334, against 4307 in the previous year, or an increase of 27.

THE LANCET.

LONDON: SATURDAY, AUGUST 19, 1893.

WE publish in another column the revised and final form of the Report of the Select Committee of the House of Commons on the question of the compulsory registration of midwives. One or two paragraphs, it will be seen, read much more clearly than did those in the draft report which we were able to publish last week. In effect, the report favours the training of midwives and recommends that when trained they shall be entered on a register and that only such trained midwives shall be placed on the Midwives' Register. As respects the great crowd of untrained midwives—the number of whom in Great Britain is variously and vaguely stated to be from about 2000 to 15,000—they are to be allowed to use the title of "midwife" alone on producing evidence that they have been in practice as *bonâ fide* midwives. Every precaution is to be taken to discourage practice by women who are ignorant and unqualified, to which practice the Committee are of opinion that much maternal and infantile death and suffering are to be attributed. The next noteworthy recommendations of the Committee are that a system of examination and registration of midwives should be established and that the General Medical Council should be invited to frame rules for regulating the admission of women to the register. These rules are to be confirmed by the Privy Council, and in the event of the General Medical Council failing the Privy Council is to invite "some other medical body" to undertake the work or forthwith itself cause the rules and regulations to be framed for the purposes required. There is some vagueness in this part of the recommendations; but they seem to throw on the Privy Council the duty of passing rules for the admission of midwives if the General Medical Council and other medical bodies fail. We are very sensible of the power and wisdom of Her Majesty's Privy Council, but we venture to think that the framing of rules for the above purpose is not unlikely slightly to exceed even its experience and its ability. It is obvious that if the General Medical Council undertakes the general work of framing rules there will still be much work to be done in localities. The examinations will be obviously of a modest character and the circumstances of candidates will be too humble to admit of their travelling great distances for such examinations. There is something to be said, therefore, for entrusting to the county councils, as the Committee suggests, the duty of carrying out locally the provisions of the Act, though great care will be necessary to ensure such functions being discharged satisfactorily. A good deal of evidence was introduced to show that in many ways the education in midwifery, even of medical students, was very faulty and inadequate, and the Committee recommend that greater facilities of study should be provided in workhouses and in lying-in hospitals.

The Committee devote a long and final paragraph to the apprehensions expressed by some medical practitioners lest the interests of the profession should suffer by an improvement in the status of midwives. They declare that the great preponderance of medical and other evidence was against such a view and expressed the belief that such improvement would not only relieve the medical profession of ill-paid and irksome work but would have the effect of inducing midwives to send oftener and sooner for skilled medical assistance. It was to be expected that the Committee would devote serious attention to apprehensions that have undoubtedly been widely spread. We have already expressed our strong opinion that whatever lines may be laid down in the direction of requiring a certain amount of training amongst midwives must be sharply defined and that no system can be satisfactory which does not absolutely limit the function of the midwife to natural labour. We have gone further and are prepared to insist that no system of trained midwives will be satisfactory which does not entirely subordinate the duties of the midwife to the control of the medical profession, making her responsible for calling in one of its members on the occurrence of the least irregularity in the labour or in the condition of the child. We have not much sympathy with the remark that it is impossible to define "natural labour." We live in a practical world, and it is not impossible to lay down rules of conduct intelligible to women of any training that will enable them to know when to send for medical assistance and enable those who supervise them to know when they have been culpable in not so sending. The political outlook affords little room for hoping that this question, which has no party interest but only a human one, will at any early time come within the sphere of practical politics, so that there need be no hasty judgment on the questions raised by the report. We hope to comment further in our next issue on some other points suggested by the report.

DR. CULLINGWORTH'S address on Pelvic Peritonitis in the Female and the Pathological Importance of the Fallopian Tubes in connexion therewith, which was published in our columns last week, is an interesting summary of the views of what may be termed the progressive school on this subject at the present time. As the readers of THE LANCET will have observed, it travels over very much the same ground as that covered by his paper on the Value of Abdominal Section in Certain Cases of Pelvic Peritonitis, which was read before the Obstetrical Society of London towards the end of last year. That the subject is one of considerable difficulty appears from Dr. CULLINGWORTH'S own words in concluding his address: "I do not for a moment suggest that every case of inflamed Fallopian tubes should be operated upon; on the contrary, I am of opinion that most of them recover without doing so, but there is a large residuum of cases—most of them chronic, some few acute—in which nothing but an operation can save life. And there is a still larger number of cases where a timely operation rescues the patient from years of misery, incapacity and chronic invalidism." In contrasting the non-operative and the operative treatment of the conditions under consideration, Dr. CULLINGWORTH gives a very interesting account of six cases in point; three were not operated upon and proved fatal, and three were operated upon and recovered completely. Now the difficulty of

deciding for or against operation appears from the particulars given of the first case, one of those that proved fatal. In this case there was a distinct history of gonorrhœa and syphilis; the patient had been ill for three weeks with headache and loss of appetite, and for four days only before admission had had pain in the abdomen and diarrhœa. On admission the abdomen was found to be somewhat distended, the tongue was dry, the pulse was rapid and feeble, and the temperature was 103° F. On vaginal examination the whole of the posterior part of the pelvis was found to be occupied by a firm hard mass. Early the next day a large quantity of offensive purulent fluid was passed from the vagina, and four hours later the patient died. Post mortem double pyosalpinx was found, and an abscess cavity occupied the posterior part of the pelvis communicating by means of an opening in the right Fallopian tube with the general peritoneal cavity, and by a small opening with the vagina also. In the light of what was found at the necropsy in this case probably no one would deny that an operation, if it had been performed early enough, would have been the right treatment. On the other hand, cases are constantly met with where the physical signs are very similar to those mentioned in this case (for example, in many cases of pelvic peritonitis following labour)—viz., fixation of the uterus, the posterior part of the pelvis being occupied by a firm, hard mass, together with fever, abdominal pain and slight distension of the abdomen—and yet where the patients recover more or less completely; that is to say, the temperature and pulse become normal, pain disappears and the general health is restored. Sometimes this may be so even where the physical signs have undergone little change; whilst, again, in other cases little or no evidence of anything abnormal in the pelvis may remain. To put the matter in another way, How are we to distinguish the cases which, as Dr. CULLINGWORTH admits, recover completely from those which are likely to end fatally? Probably in the case from which we have quoted the actual disease of the tubes was of old standing, and the fatal illness was due to rupture of the right tube, distended as it was with pus. We are not told whether there had been previous attacks of pelvic peritonitis in this case. But undoubtedly in many similar cases the patient suffers from successive attacks of pelvic peritonitis—from what has been termed "recurrent" pelvic peritonitis. We think that such attacks, when accompanied by persistent physical signs pointing to disease of the Fallopian tubes, constitute an indication for operation. A distinct history that the patient had led a dissolute life, or had had gonorrhœa, would be an additional argument in favour of operating. Dr. CULLINGWORTH'S cases that terminated fatally without having been operated on, as well as similar cases recorded by others, show that expectant treatment may carry with it a responsibility at least as serious as treatment by abdominal section.

THE time has arrived when we in England may once more properly review our cholera prospects. Judging by precedent it was very naturally assumed that we should be involved in serious risk at an early date in this year, and as a matter of fact recrudescence of cholera did manifest itself early in the spring on the western coast of France and the disease subsequently developed in French Mediterranean ports and elsewhere in the south of France. There was also a recrudescence early in the year both at Hamburg and at Altona; but the circumstances at Hamburg, which city has always constituted one of our greatest dangers, have been altogether different during this year from what they have been on former occasions when cholera reached our shores by the North German route. The recrudescence in Hamburg subsided and—the city having at immense pains and cost provided itself with a new water-supply, by which the whole of its population is now supplied—the greatest source of danger in connexion with Hamburg was removed before the date at which cholera formerly prevailed in this country. At the same time, however, it must be remembered that we have not yet reached the date when cholera first appeared in our ports last year. The first arrival of the disease was on Aug. 25th and from that date onwards fresh cases continued to arrive for a period of some six or eight weeks. As a matter of fact we have already had importations earlier this year than we did last year. Five infected vessels and seven cases have already arrived in our ports. The first arrival was from Nantes, into the river Tyne, on June 25th, and the latest was at Grimsby, in a vessel arriving from Antwerp on Aug. 2nd; but in these importations, as was the case last year, the disease was limited exclusively to persons arriving in the infected vessels from abroad. At the present moment we still have to face the fact that there is an unknown amount of cholera distributed over France and that its amount is not likely to be made known until it has wrought sufficient havoc to merit, according to French interpretation, the term of *foyer*. Indeed, we have had several importations from French ports in which the existence of a *foyer* is not yet admitted. This it is which makes holiday journeying in France a greater danger than it is elsewhere. The disease is also spreading with considerable rapidity throughout several portions of Russia, and in some places, as in Moscow, it is exhibiting a greater virulence than it did during the epidemic of last summer. The disease also holds its own and even gains ground in some parts of the south of Italy, as many as 19 cases and 12 deaths having occurred in a single period of twenty-four hours in the city of Naples. This town, however, has also provided itself with a new water-supply since the epidemic of 1885, and to some extent therefore it is not likely to be so great a danger either to Italy or to other countries as it was formerly. Then, again, there is evidence of a suspicious illness of the nature of cholera in some parts of Holland, and, remembering the wide diffusion of the disease over that country last year, we cannot but look with a certain amount of concern to the future, especially when we remember that in England we have not yet reached the usual date for the invasion of cholera. And lastly, Polish Jews have carried the infection from Russia as far as Berlin. At the present time there is more reason than ever that the utmost vigilance should be maintained at our ports and that all inland sanitary authorities should do their utmost to remove those conditions from their midst which favour the diffusion of the imported infection.

Annotations.

"Ne quid nimis."

DEATH OF PROFESSOR CHARCOT.

MEDICINE has sustained a severe blow in the death of one of its most eminent leaders. A Reuter's telegram conveyed the information that Professor Jean Martin Charcot died on Wednesday last at Morvan, where he was staying. Whilst awaiting particulars of the sad event, which will be profoundly deplored by the whole medical world, and reserving for a more fitting time a full account of the great physician, we may remind our readers of his claims to the position he will occupy in medical history He was, in the first place, a man of wide acquirements, not limited to professional pursuits alone. His knowledge of the literature of his own and of foreign countries was very extensive. His linguistic accomplishments are well known to those who have frequented medical Congresses both in this country and abroad. He was great as a clinical observer, and worthy to be ranked with such masters as Trousseau and Laennec. He was great, also, as a pathologist, and in this regard it may be said that he did not let the advance of age dull his keen interest and love for science. But what is indeed the touchstone of the original mind, no man in medical science has inspired his pupils with greater enthusiasm and regard. Witness the large audiences assembled at his clinique at the Salpêtrière and the volumes of his invaluable Leçons, which we owe to his pupils' devotion. Our readers will recall the scientific precision and the truly marvellous power of "word-painting" which characterise all his published writings from his early thesis on chronic pneumonia down to his latest contribution on the difficult and abstruse psychological rather than neurological problems with which he was mainly concerned of late years. Professor Charcot was an artist as well as a man of science, and to him is owing in very large measure the position occupied by neurology in the present day. He had many friends in this country and often came to England, and it may be remembered that quite recently he was sent on a visit to Bournemouth on a mission from the French Government. His striking personality will be greatly missed at the Congress next April at Rome.

THE HEAT AND PHYSICAL EXHAUSTION.

THE heat, as everybody knows, has been very exceptional in England this year. The meteorological record of the Royal Humane Society, in Hyde Park, has shown temperatures ranging from 70 to 93° F. in the shade, and from 120° to 130° in the sun, and as a matter of course the Volunteers at Aldershot have had a trying experience during their long hours of manœuvring under a hot sun and in the march back along hot and dusty roads to their quarters. Their sleep, too, has been disturbed by storms and lightning at night. It is not at all surprising, therefore, that these conditions have caused a certain amount of inefficiency from heat exhaustion and heatstroke. These affections, however, have not been confined altogether to the Volunteers, for many of the regulars fell out from similar causes. One man belonging to the North Staffordshire Volunteers succumbed to heatstroke at Cambridge Hospital, where several members of the Volunteer force were admitted from exhaustion attributable to the late heat and exposure. Something of this nature recurs, of course, with a certain degree of regularity each hot season, and we have frequently adverted to the measures, prophylactic and otherwise, by which these accidents can be best guarded against; consequently there does not remain much to be said on the present occasion. It is desirable that Generals and Commanding Officers should invariably give heed in such matters to the following considerations. Marches should, as far as is practicable, be undertaken in the early morning or in the evening, and the troops, instead of being massed together, should march in the most open order possible. A plentiful supply of water-carts should accompany them, so as to have water always available, and the men's water bottles should be filled with cold tea flavoured with a little lime juice before starting. The marches should not be too long, and there should be numerous halting-places to guard against fatigue and to afford opportunities of partaking of refreshment. As long as a healthy man perspires freely and has plenty of water to drink, and wears loose clothing that is freely permeable to wind and air, he may experience discomfort no doubt, but he should not suffer from any injurious effect of a serious kind by exercise in the open air, provided he lives temperately and rests from time to time in the shade when fatigued.

OVERHEAD v. UNDERGROUND WIRES.

THE mischief wrought by overhead wires was once more illustrated by a case decided last week in one of the London county courts. The plaintiff in this instance was caught and, as he alleged, nearly strangled by a telephone wire undergoing repairs which had fallen from an adjacent housetop. The cart he drove was damaged and his son who was with him was likewise injured. Substantial damages were awarded to both. There is a sameness about accidents of this kind which is very characteristic. We quoted in THE LANCET of Nov. 30th, 1889, the details of one very similar to that just mentioned. In this case a telephone conductor, probably rendered brittle by cold, snapped, and in its fall injured a passer-by. We are also unfortunately able to recall other instances in which contact with an electric lightning conductor has been followed by the most serious consequences. In view of these facts there is an obvious utility in the suggestion made some years ago by the late Duke of Marlborough in the House of Lords—namely, that overhead wires should be made to follow the lines of streets and to cross only at stated points. A further safeguard is provided in the case of high pressure electric conductors which, according to the Act of 1888, must be suspended by ligaments to supporting wires. This arrangement, if carried out in the case of all aerial conductors, would reduce the risks of accident to a minimum. After all, however, these very safeguards, and much more the occurrences which have suggested them, do but attest the importance of a fundamental change which will transform our present system of aerial communications into one which is invisible, subterranean and relatively innocuous. Of course, we do not expect that this reform will be speedily accomplished, but it would be wise at all events to take timely warning and to make a beginning in the case of new connexions.

THE SEASON IN SWITZERLAND.

A HOLIDAY CONTRIBUTOR writes:—"King Cholera is proving to the higher mountain resorts this year the *deus ex machinâ* he was to them in 1891; he is filling their half-empty hotels and *pensions* with fugitives from northern and north-western Europe. This influx of the outside world is mainly Teutonic in its *personnel*, with a proportion of French, Belgians and Dutch rather greater than usual. Of the English-speaking arrivals the North American wing is still, as compared with past seasons, 'conspicuous by its absence,' the attractions of the World's Fair and the dread that quarantine will interpose its veto to the return home furnishing reasons more than sufficient for this decrease in the transatlantic contribution. From the British Isles, however, contingents are arriving steadily, the Engadine especially being favoured with their presence. The number of visitors at

this place, the least accessible of the Swiss resorts, is explained by the monster trains that are now running between Paris and Berne and Brussels and Lucerne—trains that are crowded with tourists who come for a ten days' visit and whose rushing to and fro—natural enough, perhaps, when all things are considered—makes them not very desirable neighbours for the invalid or the overworked professional man who is intent on having a few weeks' repose and estrangement from the bustle of metropolitan association. The preponderant determination, however, of the fashionable or professional world to the Engadine is robbing that region of the charm that once belonged to it—the comparative freedom from noise being destroyed by relays of arrivals coming and going in bewildering succession. One fact is worth recording in connexion with the passenger traffic in Switzerland. The gains expected from mountain railways by their projectors or promoters are much less than were looked for. Competition has, owing to excessive multiplication, become so great that traffic has as a rule not been so remunerative as was expected. This result, if it serves to check the well-nigh morbid activity in this department of engineering enterprise, is hardly to be regretted; for if the gains that were anticipated from these far from 'silent highways' had realised expectations there would scarcely have been left in all Switzerland a mountain solitude uninvaded by the iron horse, to the great sacrifice of that repose and restorative isolation on which an 'Alpine rest cure' relies. The Rigi and Pilatus have lost far more than they have gained by the railway lines which now traverse their seamed and blackened sides; whilst the Swiss physicians themselves, in their recent congress at Chur, sounded a significant note of warning as to the extension of such swift modes of conveyance to altitudes like that of the Jungfrau. For those of the travelling public who are affected with feeble heart or high tension pulse the rapid ascent to a summit far above the snow-line is neither more nor less than to court the 'mal de montagne' or worse."

COUNTY MEDICAL OFFICERS OF HEALTH AS CONSULTANTS IN CASES OF INFECTIOUS DISEASES.

IT appears from the last report of the Sanitary Committee of the Surrey County Council that one of the rural sanitary authorities of the county has made a request that Dr. Seaton, the county medical officer of health, may be allowed to act as arbitrator in a case of difference of opinion between their medical officer of health and the practitioner in attendance, as to the nature of a disease certified under the Notification Act—at least, we take this to be the meaning of the application. In answer to this request, Dr. Seaton replied, that he could only act as arbitrator if requested to do so both by the general practitioner in attendance and the medical officer of health, and that he has on other occasions followed this course with advantage; in other words, that he is willing to act as consultant when appealed to under the conditions stated. This decision touches upon a big question, and it will be interesting to learn whether other county medical officers of health endorse Dr. Seaton's views. In the first place it raises, or rather perhaps tends to settle, the oft-discussed question as to whether it is desirable in the interest of the public health that the practitioner's certificate should be subject to correction or refusal at the hands of the medical officer of health; and, secondly, it brings to the front the debatable point as to whether the time of a county medical officer of health should be taken up in acting as a consultant in the diagnosis of infectious disease. It is, of course, true that any demands which are at present likely to be made upon his time on this account are but small, but it is not difficult to foresee that if it became a recognised practice for a certificate to be subject to the approval of a local medical officer of health, and, further, that if it were understood that the opinion of the county medical officer of health could be obtained by request, an enormous addition would be made to the duties of the last-named officer. Imagine, for example, the county medical officer of health for London placing his services at the disposal of all those who, by the hypothesis we are discussing, could claim the advantage of his experience in fevers. Although matters are no doubt tending in the direction of the medical officer of health aiding the general practitioner with his advice in doubtful cases of infectious disease, this tendency can only be an accomplished fact when the medical officer of health, by virtue of a special training in one of our large fever hospitals, possesses a knowledge which places him in a position of confidence and when, in addition, he is released from the trammels of private practice.

THE OCULO-FACIAL GROUP OF MUSCLES.

RECENTLY we referred in a leading article,[1] criticising a paper by Dr. Aldren Turner on oculo-motor symptoms in organic nerve disease, to the hypothesis of Mendel—i.e., that the orbicularis palpebrarum as well as the frontalis and corrugator supercilii, undoubtedly closely connected in their usual actions and movements with the various ocular movements, have a nervous supply not derived ultimately from the facial nucleus but from the nucleus of the third nerve. That the fibres supplying these muscles are distributed in the facial nerve is sufficiently evident from the ordinary phenomena present in facial paralysis of peripheral origin, for the obliteration of the lines on the forehead of the paralysed side and the inability to wrinkle it or to close the eye, as well as the corresponding electrical changes in the muscles concerned, are amongst the best known symptoms of the condition when it is the result of an affection of the nerve trunk. When, on the other hand, the affection is cerebral—i.e., the result of a lesion above the pons—the comparatively slight affection of the upper part of the face is in marked contrast to the condition just mentioned, and would seem to point to a certain amount of dissociation in their cerebral course of the tracts for the upper and lower parts of the face. Mendel's facts, on which he based his hypothesis, were the results of observations on animals operated on by the extirpation method of Gudden. In the leading article already referred to we mentioned the support which this hypothesis had received in the pathological observations of Dr. Tooth and Dr. Turner on a case of bulbar palsy, in which the facial nucleus was found to be atrophied, the nerve trunk, nevertheless, containing many healthy fibres. We also pointed out that the hypothesis would certainly advance a stage if a case of complete ophthalmoplegia could be found in which there was evident weakness of the oculo-facial group of muscles, whilst the lower part of the face remained unaffected. Dr. Hughlings Jackson in his "Neurological Fragments," recently published in our columns,[2] has brought forward and described with the extreme care which makes his clinical records models of what such work ought to be—a crucial case of complete, or nearly complete, ophthalmoplegia, in which both by observations of muscular action and by means of electrical tests he was able to demonstrate the weakness of the oculo-facial muscles, whilst there was no evidence of an affection of the lower part of the face. Such a case would seem to be almost conclusive, but no doubt instances will have to be multiplied and certain difficulties overcome before the conclusion is accepted that the fibres in the facial nerve supplying the so-called oculo-facial group of muscles are originally derived from the cells of the third nucleus. Perhaps one objection that might be raised is, even

[1] THE LANCET, April 1st, 1893.
[2] THE LANCET, July 15th, 1893.

if the clinical phenomena are taken for granted, which we think they must be, it does not follow that no cells in the facial nucleus are not affected. The curious association in nuclear affections of distant structures—for example, the involvement of the third and sixth nuclei in ophthalmoplegia itself—might be quoted as giving some semblance of probability to the older view, and we may be sure that this and other points will receive a considerable amount of attention from neurologists in the near future but there is no doubt that the evidence already brought forward, by Dr. Mendel from the experimental side, by Dr. Tooth and Dr. Turner from the side of pathological examination, and by Dr. Hughlings Jackson from clinical observation, make out a strong *primâ facie* case for the hypothesis which these observers have adopted.

THE DIFFUSION OF SMALL-POX.

IN the metropolis the diminution in the amount of small-pox still continues, and the number of cases under isolation in the hospital ships and in the convalescent hospitals belonging to the Metropolitan Asylums Board varied last week between 190 and 200 per diem. Isolated fresh attacks of the disease occurred in the week ending August 12th in a number of places, such as Dudley, Bristol, Derby, Hyde, Manchester, Keighley and Halifax; and other fresh occurrences were as follows: Bradford, 16; Tottenham, 8; Wakefield, 5; Salford, 5; Birmingham, 4; Tynemouth, 4; Leicester, 3; West Ham, 2; Stalybridge, 2; and Oldham, 2. In Leeds the abatement of the disease is maintained, and the last report from that borough is to the effect that only 11 cases remain under treatment in the hospital belonging to the sanitary authority.

HOLIDAY SEEKERS.

CESSATION from toil for a time is practically a necessity, if the wear and tear of life is to be made good. To the brain worker it is an absolute necessity, if a breakdown is to be avoided. There is probably no class of professional men that more requires rest and freedom from the trammels and petty annoyances of duty than the busily engaged and hard-working followers of our own profession, especially those in large cities, and in London in particular. "Society" can fix the date of its exodus into the country, although it must not be supposed that "fashionable people," and especially those who are young, escape in that way from the effects of weariness and fatigue, so inimical alike to mental and bodily health. The country practitioner knows from experience how with the influx of his fashionable patients his visiting list enlarges. The months of June and July are more or less a leisure time to country practitioners, whilst the London practitioner can avail himself only of August and September, when London is comparatively empty. The glorious sunshine calls aloud to those practitioners who have until the present been denied the *dolce far niente*—the restorative of leisure and reposeful exhilaration—to betake themselves without delay, even for a brief season, to "fresh fields and pastures new."

CONTRAVENTION OF THE OATH OF HIPPOCRATES.

IN that memorable oath which the Father of Medicine made binding on all who entered on the study and practice of the healing art there is no passage more honourable in its conception or more solemn in its language than that which relates to the confidence between the patient and his medical attendant. Civilisation in its most elevated and refined developments has not improved upon it—therein affording another confirmation of what in the "Novum Organum" Bacon observes of physical and moral science, that whereas the former is susceptible of infinite advance so that no limit can be put to its many sided evolution, the latter attained its maturity early, insomuch that in nearly all essentials it may be regarded as stationary. The passage in question runs as follows: "If in treating a patient, or even independently of treating him, I shall have seen or heard anything as to his life which ought never to be spoken of in public, on this I shall preserve silence, deeming particulars of this nature as not proper to be revealed" (*ἄρρητα ἡγεύμενος εἶναι τὰ τοιαῦτα*). To the honour of the profession be it recorded that the instances are rare indeed where this obligation to secrecy has been violated—an honour none the less notable that in the words of a profound student of human nature "a man, in order to save his life, will tell a physician or surgeon what he would not disclose to a lawyer to save his fortune, or to a clergyman to save his soul." Rare therefore as are the violations of this reticence on the medical practitioner's part it is not to be wondered at that the penalties attaching to them are so severe or that the retribution with which a deplorably indiscreet physician has just been visited abroad receives such publicity in the European press. Two months' imprisonment and the withdrawal of his medical diploma for five years are announced as having been meted out to him for his having "trahi le secret médical, c'est-à-dire, raconté à des tiers les maladies dont quelques-uns de ses clients étaient atteints." Besides this professionally disqualifying punishment he has been sued in the civil court by several of the patients whose confidence he had abused and has been condemned to pay damages amounting in some cases to 2000 marks, in others to 400, according to the gravity of the offence. To live down such a blot on professional fair fame can be no light undertaking. Indeed, as a contemporary puts it, "il ne lui reste plus qu'à s'expatrier, car il ne retrouverait pas un malade à soigner dans son pays." So accurately, it appears, did the Father of Medicine anticipate the moral standards of the nineteenth century, so sagaciously has he formulated a code of professional honour which humanity after more than two millenniums of experience can but interpret and apply.

ENTERIC FEVER AT WORTHING.

IN Worthing enteric fever is maintained in a slumbering form, and it cannot yet be stated whether the diminution is due to the abandonment of the specifically polluted water or to the cessation of the cause of origin. The local authority having finally determined to abandon their existing water-supply, the question has arisen as to the best means of supplying the wants of the public pending the construction of new works. One proposal, which seems to have been strongly pressed, was to resort to a process of sand filtration of the water from the suspected wells. Apparently this proposal is based on the modern experiences as to filtration, notably at Altona; but the conditions do not appear to us to be in any way parallel. A remarkable, although partial, elimination of micro-organisms from the Elbe water was effected at Altona as the result of filtration; but Professor Koch distinctly stated that it was not the sand filtration which effected the result attained. On the contrary, the sand itself signally failed, and it was only when the sand layers were uniformly coated with a layer of river mud and organic matter that the elimination of micro-organisms was attained; and even then Professor Koch admitted that organisms of pathogenic type probably passed through. How this mud layer, which is essential, was to be secured at Worthing did not transpire; and we may fairly assume that it would not result from the use of the well water alone. Apparently the town council submitted the matter to Dr. Thorne Thorne of the Local Government Board, who is reported to have sent a written answer, reverting to Professor Koch's experience to the effect that, "even under favourable circumstances, sand filtration cannot give absolute

protection against the danger of infection." Under these circumstances the town council abandoned the scheme, and decided to make some arrangement with the Shoreham Water Company for a temporary supply of water for Worthing. In the meantime Dr. Theodore Thomson is continuing his investigations, especially as to the actual source of the original contamination.

CHARING-CROSS HOSPITAL POST-GRADUATE CLASS AND LECTURES.

SPECIAL series of clinical lectures and practical demonstrations, exclusively arranged for the convenience of practitioners and post-graduate students, are given at Charing-cross Hospital by members of the staff throughout the year. The lectures for the year are arranged in three courses, each course consisting of ten meetings and lasting ten weeks. Two of these courses are held during the winter and one during the summer. The class meets on each Thursday afternoon at 4 P.M. in the board-room of the hospital and proceeds thence to the wards or other department in which the demonstration may be held. The fee at present charged for each course of ten lectures is one guinea. The first of the two winter courses of the ensuing academical year will commence on Oct. 12th next and will be conducted by the following members of the medical and surgical staff: Drs. Green, Bruce, Willcocks, Murray, Mott, Routh and Arkle and Messrs. Bloxam, Boyd and Waterhouse. Practitioners wishing to join the class can receive any further information as to the dates and subjects by communicating with the honorary secretary (Dr. Willcocks) or the honorary treasurer (Mr. Boyd) at the hospital.

RED CROSS MOUNTAINEERING.

WHILST, in dread of the cholera which is hovering on her frontier and even advancing into her interior, Italy suspends the autumn manœuvres of her army her Red Cross associations seem to embrace the insanitary season with alacrity as affording all the more fitting occasion for placing their resources *en évidence*. Within the last few days Tuscany and Piedmont have vied with each other in starting the hospital trains of their respective branches of the "Croce Rossa" on trial trips along the iron roads of the Apennines and the Alps, so as to test their wayfaring power on the more difficult routes and to supply their officers, medical and lay, with the experience that may sooner or later be called upon in the stricken field. The former of these Red Cross associations—that of Tuscany—ran an excellently appointed train composed of six carriages through the cross-country stations between Florence and Siena, pausing from time to time at intermediate points to undergo inspection at the hands of local authorities; after which it resumed its progress till it reached its journey's end, where the staff alighted and went through the operation of fitting up a hospital section capable of accommodating one hundred patients. On its departure from Florence at 5·35 A.M. the spectator might have found that its *modus operandi* had been to take six third-class carriages, empty them of their seats, and to furnish them with the beds for the wounded, with the dormitories for the medical officers, with the kitchen, the pantries, the pharmaceutical laboratory and, in short, with all the appurtenances of a fully-equipped ambulance train. The whole, of course, was on a *bijou* scale; but its object was only to make a trial of its appointments and its *personnel;* so, instead of the fourteen carriages for the wounded—fourteen being the regulation number—there was but a single one properly fitted up. That, as well as the others for the professional and assistant staff, were models of completeness, comfort and tidiness, the kitchen being as perfect as if it had been constructed to figure at an International Exposition, so rich was it in its supply of utensils, of water for every purpose, including that for drinking, filtered and iced, and of water boiling and medicated, ready for every emergency. On the principle that Red Cross trains obtain their provisions from the countries through which they pass, their store-rooms are never extensive in this particular; but in the Tuscan trains there was ample accommodation set apart for a commissariat sufficient to last for some days, being provided, moreover, with refrigerators and ice-making machines to ensure the freshness of the meat, the butter, the oil, the milk and such-like perishable articles. The "pharmacy" contained, in addition to every agent in the Pharmacopœia, a complete assortment of bandages, carbolised and non-carbolised, and so arranged that the eye could take in their size and compass at a glance; whilst the *armamentarium chirurgicum* was fully appointed, so as to represent the latest improvements in military surgery. After the strictly material part of the train had been examined, the spectator might have seen the accommodation for the *personnel:* a special infirmary for the medical men (themselves sometimes wounded); an office and private room for the clerk of accounts; a room for the chaplain; a room for the four assistant surgeons; a room for the staff surgeon who accompanies the train; and a room for the medical superintendent. The impression carried away from such a rapid inspection of the convoy and its appointments was one highly flattering to the resources of the Tuscan branch of the Red Cross, resources in *matériel* of every kind, which implies a well-filled "war chest," replenished from time to time by the contributions of the public. Such trips, indeed, as those recently undertaken, bringing as they do the wants of the Red Cross so vividly before the populations of the towns at which a halt is made, serve the purpose of appealing to the charitable so effectively as quite to explain the extent and variety of the resources referred to. The whole trip, concluding with the experiment in hospital construction at its terminus at Siena, was satisfactory in all respects—a result worthily emulated by the sister branch in Piedmont, which ran a train, equally well equipped, over a still more tortuous and elevated railway net-work and which at sundry halting-points went through various evolutions in mobilisation, including the taking down and reconstructing of ambulance convoys and hospitals in a manner which was commended alike by the official inspectors and the professional public. The Red Cross service afloat, of whose development, particularly in Lombardy, on the lakes, canals and rivers which form so complex and at the same time so convenient a waterway, we have from time to time taken notice, will shortly put its system and its working *en évidence* and will afford one example the more of Italy's advance in the promotion of an organisation of which she justly, we believe, claims to be the initiator. Specimens, we may add, of her ambulance equipment on road, river and rail will figure largely at the International Exhibition of Medicine and Hygiene in Rome at Easter next, and, compared or contrasted with the similar equipments contributed by Germany and Austria, will form an admirable object-lesson in the devices and appliances evolved by civilisation to mitigate the horrors of war.

CASE OF MORVAN'S DISEASE.

IN a recent number of the *British Journal of Dermatology* Mr. Hogarth Pringle describes a case of this curious and interesting condition. The disease, according to the authority whose name it bears, is characterised by paresis with analgesia of one or both upper extremities and the production of one or more whitlows, although later investigations have shown that these symptoms are not necessarily pathognomonic. The disease is gradual in its onset; analgesia is usually accompanied by anæsthesia, but the whitlows are not necessarily painless. Fissures in the palm are not uncommon, and muscular atrophy affecting usually the thenar and hypothenar eminences and the interossei muscles are sometimes present. Scoliosis is also frequent and joint changes similar

to those in locomotor ataxy have been described. The knee-jerks are usually increased, but sometimes diminished. In the first complete post-mortem examination made by Gombault the peripheral nerves were found to be in a condition of diffuse sclerosis, whilst the posterior columns and horns of the cervical cord were also sclerosed and cavities were present in the cord, whilst the central canal was distended with small cells. Gombault thought the cavities were artefacts. The next stage was the recognition by Charcot of the identity of syringomyelia and Morvan's disease, and then it became a question whether Morvan's disease was not really anæsthetic leprosy, and this point is still undecided. Mr. Pringle's case was a woman of twenty-three there being nothing suggestive in her family history. Eight years ago she had the first of many painless burns. Two years later the middle finger of the left hand suppurated and had finally to be amputated. There was defective but varying sensibility over both upper limbs, thermal sensibility being especially affected, the thenar and hypothenar eminences were much wasted, and there was well-marked scoliosis. There were numerous cicatrices from burns over the left forearm and a small ulcer on the left elbow. Sensory variations were found to occur on repeated examination later and the left ulnar nerve at the bend of the elbow was found to be distinctly thickened. Ankle-clonus was not present at first but was distinct subsequently, and the knee-jerks were always brisk. The lower limbs also became affected as regards the sense of heat. Mr. Pringle, in discussing the pathology of the condition, expresses the opinion that Morvan's disease is a variety of syringomyelia. The presence of peripheral neuritis is, however, manifest and the fresh difficulty presents itself of distinguishing between Morvan's disease and anæsthetic leprosy. Whether they are the same or not seems to be still doubtful, even more doubtful than it would have been considered some time ago, and whether they are one and the same thing is a proposition to which in the meantime no answer can be given. The case described is a most interesting and carefully recorded one It does not, of course, afford any clue to the exact nature of the disease, but as a clinical record of an anomalous disease it is likely to be useful.

THE MEDICAL PASTOR.

THAT the training of the physician or surgeon is, by itself and without ultimate view to practice, of peculiar value to all who come closely and frequently into contact with their fellow men we have more than once pointed out, as instance by instance has been brought before us of exemplary citizens, who to their special culture have added a sound knowledge of the healing art. It is from Edinburgh that the last typical "case in point" has been put *en évidence*. There, we read, in Christ's Church, the resort of a large and influential congregation on the south side of the town, two stained-glass windows and a mural brass have been erected as a memorial to the Rev. Francis Edward Belcombe, M.A., M.R.C.S. Eng., the first incumbent of the church. This gentleman, whose solid and varied culture included qualification for the career of a surgeon—a career which, on finding that, in the well-known phrase of Dr. William Stokes of Dublin, he did not possess in due proportion the *mens medica* he exchanged for that of a clergyman—lived and laboured for eleven years in the service of his flock and, indeed, of all who came within the sphere of his active and enlightened humanity. He was—as his successor, the Rev. C. M. Black, illustrated with chastened eloquence at the unveiling of the memorials referred to—a modest but effective follower in the steps of that "beloved Physician" to whom the Apostolic Church owed so much of its diffusion and acceptance. In visiting the poor, in coöperating with the votaries of the not less humanitarian calling of medicine, in aiding and promoting every good effort for the sanitary and social well-being of his neighbourhood, his surgeon's education stood him in admirable stead and reinforced his ministerial efficacy in a thousand ways. Would that such twofold equipment was more general amongst those whose avocations bring them into daily cognisance of the submerged masses—into the homes, or rather the hovels, "where poor men lie." For in that stratum of society exists a field for the combined energies of the "medical pastor," quite as open to "good works"—quite as necessary for the interests of true civilisation—as in any of the recently unveiled "spheres" of "Darkest Africa." True it is that the "knight-errantry of humanity" offers no career more honourable than that in which medical missionaries of the stamp of the Edinburgh graduates Gunn and Lamb are working in the New Hebrides, or in which other similarly qualified agents like Elmslie, Steele and Cross are dedicating their lives in the "Scots settlers" region round Lake Nyassa. The labours of these, and such as these, devoted men have found recognition enough in our columns to acquit us of the charge of under-rating such noble self-sacrifice. Still, it is well to recall attention from the more romantic—the more "sensational," if we may hazard the word—enterprise of the medical pastor in the tropics to that which appeals to the same doubly qualified benefactor nearer home, and to give its due meed of acknowledgment to the humanitarian pioneer who turns aside from the well-to-do world to explore its depths of squalor and misery and to bring to some participation in the blessings of life those strugglers for existence on whom the sunshine of prosperity or comfort has never dawned. Such a salutary reminder is afforded in the career of the "medical pastor" which has been so recently commemorated within the shadow of the great northern school—a career which should not lack imitators in times like these, when civilisation, for its own sake, if for no higher motive, must bestir itself to mitigate the all too sharply accentuated contrasts between social well-being and its neglected antithesis.

AUTUMNAL DIARRHŒA IN THE METROPOLIS.

THE rise in the number of deaths from diarrhœa in the metropolis is attracting attention; but as a matter of fact the returns exhibit, as yet, nothing that is in any way abnormal. During the month of April the average weekly number of deaths from diarrhœa was about 12; with the advent of May and the exceptionally hot weather then experienced the weekly average reached 27 for the five weeks ending June 3rd; and in the next three weeks the deaths increased to 70, 96 and 188 respectively, besides a few deaths from English cholera. In the five weeks ending July 29th there was a further marked rise, the average number per week reaching 233 and the greatest mortality being 272 in the week ending July 22nd. Of these 272 deaths from diarrhœa, 256 were in children under five years of age and 225 in infants under one year, and they were supplemented by 6 deaths from English cholera; but, after all, the mortality even for that week was not excessive—indeed, it was 26 below the corrected average; and it has since fallen to 162 for the week ending Aug. 5th, and to 135 for the week ending Aug. 12th, probably to rise again with the excess of temperature which has been prevailing during the past week or ten days. Much interest attaches to this autumnal diarrhœa from an etiological point of view. It can hardly be other than a specific form of diarrhœa, which is favoured whenever a moist and pervious soil receives filth and is exposed to a high temperature. In many instances the specific poison seems to act through food-supplies, notably through milk, which is so often kept in back pantries and underground apartments, where it is exposed to emanations from the soil and from imperfectly flushed closets and drains, the result being the formation in the milk of a chemical poison which operates with fatal rapidity at early periods of life. Well-paved and well-cleansed yards, frequent

scavenging, the use of recently boiled milk, and the storage of milk and other food-supplies in a dry and moving air, where they are not exposed to such emanations as have been referred to, would certainly tend to diminish the amount of infant mortality from this cause. That other causes also conduce to diarrhœa, and even fatal diarrhœa in infants, must be admitted; but the conditions we have named are amongst the most potent in conveying the infection of the specific diarrhœa from which so many of our large towns and cities are apt to suffer at this season of the year.

IODINE IN TYPHOID FEVER.

CONSIDERABLE success has attended the treatment of patients suffering from typhoid fever with iodine in the practice of Dr. Klietsch, who reports in the *Münchener Medicinische Wochenschrift* that out of eighty-one cases treated in this manner only two died. The mixture prescribed consisted of: iodide of potassium, from 90 to 120 grains; distilled water, 2½ drachms; peppermint water, 2½ drachms; solution of iodine, from 8 to 12 grains: from 8 to 10 drops to be taken every two hours. From four to six days after this treatment was commenced the temperature began to sink and grave cases became transformed into mild ones. As a rule defervescence occurred between the eighth and twelfth days; the condition of the bowels was very much better than under other forms of treatment. It was noticed that the appearance of the typhoid rash was exceptional. The theory of the method is that iodate of sodium is formed and that this is decomposed in the Peyer's patches, giving off nascent iodine, which is inimical to the development of the typhoid bacilli.

THE ORIGIN OF PUERPERAL SEPTICÆMIA.

THE discussion on puerperal septicæmia at Newcastle-on-Tyne, a report of which appeared in the last issue of THE LANCET, emphasised the fact that, although puerperal fever has been practically banished from the best-managed lying-in hospitals, it still prevails to a lamentable extent in private practice. This deserves the serious attention of the profession, for there can be no doubt that the measures that have produced such gratifying results in lying-in hospitals would be attended by equal success if they were habitually followed by those engaged in attending lying-in women at their own homes. All who practise midwifery would do well to adopt the opinion expressed by Dr. Cullingworth in the course of the discussion—an opinion which, we may say, is generally accepted by the best modern authorities—that infection from without is almost invariably the cause of puerperal septicæmia. This is only another way of saying that puerperal fever is almost always a preventable disease. By far the most important preventive measure is the thorough cleansing of the hands and nails with soap and water and a nail-brush, which should be followed by the immersion of the hands in a separate vessel containing a 1 in 1000 corrosive sublimate solution, before making any vaginal examination or touching the genitalia. This applies to the nurse as well as to the accoucheur. It is also generally recognised, as the readers of THE LANCET are aware, that examinations should only be made when they are really necessary to ascertain the progress of the labour. The so-called "autogenetic" form of puerperal fever is that which arises from the decomposition of blood-clot or portions of placenta retained in utero. To avoid the occurrence of this variety is obviously only a question of the proper management of the third stage of labour; especially, on the one hand, to ascertain by actual inspection that the placenta has come away entire and, on the other hand, to secure tonic contraction of the uterus by keeping the hand on it for some time after the expulsion of the placenta and to knead it if it should become relaxed. It seems to be sound practice as an auxiliary measure in the same direction to give a full dose of ergot when the placenta has come away. The immediate suturing of a ruptured perineum with, for example, silver wire or fishing gut is also an important matter. Instruments should be boiled and immediately before use they ought to be dipped in a 1 in 40 carbolic solution. Vaginal douches during the lying-in period are of little importance as regards avoiding the occurrence of puerperal fever. They are merely useful in bringing about as complete a state of local cleanliness as is possible under the circumstances and they often promote the comfort of the patient. It is better that the douche should consist of some non-poisonous antiseptic, such as weak iodine water. The question as to whether or not a practitioner who has already had a septic case should attend other cases was alluded to by several of the speakers. We think that, provided sufficient attention be given to antiseptic precautions by changing the clothes and rendering the hands and nails thoroughly aseptic by such a method as that above mentioned, a medical man might go, as Dr. Sloan said, from examining a case of puerperal septicæmia to attend a lying-in woman with perfect safety. On the other hand, however, the very fact that a practitioner had already had a septic case should certainly lead him to make a searching self-examination and review of the exact system that he had adopted in the case that became septic. This system should be compared with that recommended by the highest authorities, to which we have already referred in detail, and if found to be less strict it would be a wise precaution to adopt the stricter antiseptic method in attending future cases.

THE DIAGNOSIS OF TYPHOID FEVER.

Dr. V. FILIPOVICH of Odessa has remarked that, in all the cases of typhoid fever that have come under his notice during the last two extensive epidemics in Odessa, there have been a peculiar induration and yellowish or orange tint in the prominent portions of the plantar and palmar surfaces instead of the reddish colour to be observed in healthy subjects or the bluish tinge which those parts assume in a cyanotic patient. This yellowish appearance is to be accounted for by the enfeebled action of the heart, the incomplete filling of the capillaries and the dryness of the skin in typhoid fever. The sign is so constant and so well marked that Dr. Filipovich thinks that it should be looked upon as affording important assistance in the diagnosis of doubtful cases. That it is in no sense peculiar to the two epidemics that occurred in Odessa is shown by the observations of Dr. Skibnevski, who states that he invariably observed it during an epidemic in the neighbourhood of Moscow.

SMALL-POX AND THE SALVATION ARMY SHELTERS.

IN a letter which we published in THE LANCET of June 17th last Dr. Waldo, the medical officer of health for St. George-the-Martyr, Southwark, drew attention to the danger of the spread of small-pox and other infectious diseases arising from the exclusion from the provisions of the Common Lodging-houses Acts of shelters founded by benevolent individuals or societies. This point formed the subject of question and answer in the House of Commons on the 25th ult. On that occasion the President of the Local Government Board stated that in every case where a patient had been certified as suffering from small-pox he had been removed to hospital by ambulance. Without for a moment doubting the authenticity of the information on which the right honourable gentleman relied, it appears to be certain that in some cases at least the safety of the public, instead of being secured by the Acts against the extension of contagious disease, is endangered by the procedure of irresponsible persons or societies. A case in

point is furnished by the action of the vestry of St. George-the-Martyr against the superintendent of the Blackfriars Salvation Army Shelter in which Dr. Waldo stated in evidence—which was corroborated by Inspector Edwards and not denied by the defendant's counsel—that a man, who was notified on June 25th as suffering from small-pox, had slept in the Army shelter in the Blackfriars-road on the previous night and that on the 25th the man had informed the "lieutenant" in charge of the shelter that he had "spots on him." The "lieutenant," in reply, said "you had better go to the infirmary." The evidence went to show that the man had walked, in company with a fellow-lodger, to the Lambeth Infirmary, whence he was directed to the St. Saviour's Union Northern Relief Station in the Borough, where he was isolated; and that he was afterwards sent to the Asylums Board Small-pox Hospital by ambulance. In this case, had the authorities of the shelter been under the protective provisions of the Common Lodging-house Acts, the "lieutenant" would have been compelled by a clause of these Acts to have communicated with the union medical officer, the relieving officer, and with the commissioner of police or his officer.

HEMIPLEGIA AND THIRD NERVE AFFECTION.

DR. EDUARD MENZ has published in the *Wiener Klinische Wochenschrift* a case illustrating this affection. The patient was a child six years of age, who when ten months old had an illness characterised by restlessness; the extremities of the right side became weak and the left eye was turned outwards. Motor power improved in the course of a few weeks, but the child became subject to attacks of tonic spasm associated with unconsciousness. When the patient came under observation at the age of six, as already mentioned, the right side of the face was smaller than the left. Both eyes were divergent, the left pupil was immobile, the right pupil was not, and the left eye in attempting to turn inwards could not pass beyond the middle line. Upward and downward movement was abolished in both eyes, but the fundi were normal. The right side of the mouth was paretic and the tongue deviated to the right. The right upper and lower limbs were small and their muscles badly developed. There was difficulty in carrying out the movements, a certain amount of contracture being present and the reflexes were increased on the right side. Dr. Menz considers the condition probably to depend on a lesion in the left crus cerebri crossing the middle line, and thus involving the fibres of the right third nerve as well as those of the left.

CHOLERA PROSPECTS AND ARRANGEMENTS IN THE METROPOLIS.

TOWARDS the end of last June the Local Government Board issued a memorandum on cholera prospects by their medical officer to metropolitan and certain other sanitary authorities, and they asked the several metropolitan authorities to inform them of the arrangements which they had decided on with a view of giving effect to the cholera regulations which might be issued in case the disease made its appearance in London. One report which has been prepared by Mr. F. W. Alexander, the medical officer of health for Bromley and Poplar, dealing with the subject, is an excellent type of the preliminary work which it is so desirable should everywhere be carried out within the area of the metropolis. Mr. Alexander has made certain arrangements for immediately entering into temporary possession of plots of land near the docks and elsewhere for the erection of hospital buildings. He describes the sites and specifies their areas and points of convenience, and he explains what provisional agreements have been entered into as to their use. He next refers to the temporary hospitals which he has in view, and he explains that he has made preparations for the use of tents should these be required. He then goes on to state his view as to the houses of refuge, and he suggests that certain houses should be rented by the authority for a period of six months; and he explains that he has secured the coöperation of the Metropolitan Asylums Board as to the use of ambulances, litters and bearers. A scheme for the division of the district into special cholera areas has been matured and arrangements have been made with druggists as to drugs, disinfectants &c. Finally, he refers to the question of nurses, the placarding of the district with bills should the need for this arise and other matters. Mr. R. M. Talbot, the medical officer of health for the Bow division, has also made a report on somewhat similar lines, but in briefer form. If all the London sanitary authorities have been equally well advised and have acted on the advice given them, London will be well prepared for meeting any anticipated emergency; it is sincerely to be hoped that uniformly good work has everywhere been arranged for in advance.

BISMUTH AS A LOCAL APPLICATION IN BURNS.

THE treatment of extensive burns by bismuth, which is employed by Dr. Bardleben in the Friedrichshain Hospital, Berlin, is stated by Dr. Spigearni of Moscow to have succeeded admirably in the case of a man who was accidentally burnt in a Russian bath by means of a jet of superheated steam. The burn covered the face and the whole surface of the body, with the exception of the feet, the legs and the lower third of the thighs. When Dr. Spigearni saw him he had been for six days under the care of another surgeon, who had applied iodoform. This was completely caked by the purulent and serous discharges from the blisters and the temperature was nearly 102° F. After cleansing the surface thoroughly by means of absorbent cotton wool and boracic lotion it was well powdered over with subnitrate of bismuth enveloped in an absorbent cotton wool dressing, the latter being omitted from the face, and quinine and stimulants were ordered. A marked improvement soon began to show itself; the dressing was changed three times in the course of the three weeks during which the man remained under treatment, when he was completely cured. No sign of bismuth poisoning was observed.

NAMES AND TRADE-MARKS.

THE deeply rooted conviction of the commercial value of names and trade-marks has been amply shown by the amount of energy recently displayed in the litigation connected with "Kutnow's Improved Effervescent Carlsbad Powder." The fame of the Carlsbad waters and their efficacy are matters beyond dispute, and it is well known that, with a view of rendering the benefits more accessible and also doubtless from certain commercial considerations, a salt has been prepared from the Carlsbad "Sprudel" mineral water. As long ago as April, 1890, application was made for the registration of a trade-mark comprising the words "Kutnow's Improved Effervescent Carlsbad Powder," with a picture of the rock at Carlsbad, surmounted by a chamois, and with the words, "Hirschensprung or Deer Leap, Carlsbad." The municipality and their lessee opposed this registration and the whole matter has ultimately reached the High Court of Justice. It was argued on behalf of the municipality that the device of the rock and the chamois might mislead persons into the idea that they were buying the salts of which the municipality were the sole proprietors, and that the word "Carlsbad" might give the impression that the improved effervescing powder was the natural salt of some spring instead of being an artificial manufacture. Mr. Justice North, before whom the case was argued, decided all points in favour of the applicant, holding that a picture of a well-known object, the property of one person, might be adopted as a trade-mark by another, and that the word "Carlsbad" in connexion with a powder merely indi-

cated the possession of certain medicinal effects, comparable with the use of the terms "Seidlitz powders" and "Epsom salts." He further observed that the description of the powder indicated sufficiently that it was an artificial product: it "was improved, for it contained an addition which disguised or took away the nasty taste of the natural spring, and it was made effervescent, a quality that the natural salts did not possess." Messrs. Kutnow and Co. have therefore gained the day, and for the future the name "Carlsbad" when applied to powders is to be dissociated from any special geographical meaning and is to be understood as indicating only the possession of "certain medicinal effects not necessarily connected with the place."

ANTIPYRIN IN EPISTAXIS.

IN idiopathic epistaxis Dr. Guénot of Laroche-en-Brenil has frequently found a local application of antipyrin to be of great service. As a rule, he employs a solution of the strength of 1 in 5, but in mild cases a 1 in 10 solution is strong enough. He directs the patient to pour a little into the hollow of the hand and to inhale it vigorously. In the case of young or intractable children this method is of course not applicable. Here a syringe must be used and after the nostrils are filled they should be compressed for a moment so as to allow the antipyrin time to act.

TREATMENT OF INFANTILE CONVULSIONS.

M. JULES SIMON recommends the following line of treatment of infantile convulsions:—1. Empty the digestive tract by an enema and by tickling the fauces to promote vomiting. 2. If the attack continues, administer ether or chloroform on a handkerchief. 3. Administer by the mouth, or if necessary by enemata, repeated doses of the following mixture: chloral hydrate, fifteen grains; bromide of potassium, fifteen grains; syrup of codein, ten drops; tincture of musk, ten drops; tincture of aconite, ten drops; orange-flower water, three ounces and a half—this quantity to suffice for twenty-four hours. 4. When the attack is very grave give a warm bath and apply a small blister to the back of the neck or the epigastrium, leaving it on for three hours. Antiseptic precautions should be observed and a poultice subsequently applied.

THE INTERNATIONAL CONGRESS OF PUBLIC HEALTH, 1893.

IN connexion with the Columbian Exposition at Chicago a series of international congresses has been organised. These meetings have been in progress since May and some of them, as those of charities and of engineering, have been of great public interest and value. That on public health will hold its sessions in the week commencing Oct. 9th, and besides individual invitations general ones are extended to all persons the world over who are interested in this important subject. The annual meeting of the American Public Health Association is the nucleus around which this Congress assembles and the machinery known as the Congress Auxiliary is that through which its organisation will be effected. Membership in the Congress is open without fee to everyone interested in public health. The payment of five dollars (one guinea) and election to membership in the Association, which is practically open to all in attendance, will entitle the member to the published transactions. The Congress will hold three general sessions, on Tuesday, Wednesday and Thursday, for the discussion of: (1) the prevention or control through public health service of tuberculosis, diphtheria and pneumonia; (2) the diarrhœa of childhood, cholera and enteric fever; and (3) small-pox, measles, scarlet fever and the diseases of modern life due to nervous conditions. The afternoons of the same days will be devoted to work by Sections: (1) International and National Hygiene, including Vital Statistics; (2) Municipal Health Service; and (3) the Causes, Prevention and Control of the Infectious Diseases of Men and Animals. In the evenings general meetings of a popular character will be held, to disseminate information on the prevention of infectious diseases; the causes of ill-health due to soil, air and water; and the health and sickness of workers. Papers will be read in English and are expected to be practical and not elementary in character. Votes of praise or censure, or such as would commit the Congress to special views, will not be taken. It will facilitate organisation if those who expect to attend will notify as early as possible "the Secretaries of the Public Health Congress, Chicago, Illinois." The secretaries desire to receive papers before Sept. 15th, if possible. It is feared that large Continental delegations will not be present, but there is a strong desire that the British contingent may be numerous.

THE COMMITTEE ON DEATH CERTIFICATION.

THE Select Committee of the House of Commons on Death Certification held a short meeting at Westminster on Tuesday, the 15th inst. Their report will not be completed for another week or two.

EPIDEMICS OF ENTERIC FEVER.

SEVERAL fatal epidemics of enteric fever have been reported to us. One has occurred at Widnes, where twenty-seven fresh attacks have been notified and where it is said that the disease is of a very serious type. Another is at Stockport, which is alluded to in the letter of our Manchester correspondent.

THE SUPRA-RENAL CAPSULES IN PYOCYANIC INFECTION.

MM. LANGLOIS AND CHARRIN, observing with regret that in bacteriological investigations the supra-renal capsules are very rarely examined, or if so only macroscopically, have endeavoured to remedy this defect in their investigations on pyocyanic infection. They report that the supra-renal capsules of guinea-pigs with acute pyocyanic infection were always enlarged and were darker on the surface than normal. The capillaries of the surface, too, were full and congested; the surface of a longitudinal section was dark. When the juice was sown on agar pyocyanin appeared. After hardening, sections showed the central zone engorged with blood; the vessels were dilated and sometimes hæmorrhages could be detected. The tubes bordering on the central zone were enlarged and the cells contained coloured granules.

HYPODERMIC INJECTION OF NITRO-GLYCERINE FOR THE RELIEF OF THE EPILEPTIC PAROXYSM.

DR. ELLIOT BATES, in a recent number of the *New York Medical Journal*, recommends this drug when the sufferer from epilepsy lies where he has fallen, with rigid limbs and unconscious of all surroundings. He details some cases where very marked relief was afforded by the hypodermic injection of nitro-glycerine in doses of one-hundredth of a grain. He used it in twelve cases altogether without a failure. In one case the patient had had attacks for four years, and when Dr. Bates saw him he was rigid and totally unconscious, with violent muscular convulsions, foam about the mouth and all the other symptoms of an epileptic seizure. A hypodermic injection of nitro-glycerine was given and before the needle could be withdrawn total relaxation took place, consciousness returned and the patient asked for some water. The use of this drug and of nitrite of amyl has been recommended at the beginning of an attack as soon as the least suspicion of an aura arises—i.e., to abort the attack; but its use after the

attack has been established has for the first time been advocated, and Dr. Bates hopes that the method may be given a trial.

FOREIGN UNIVERSITY INTELLIGENCE.

Amsterdam.—Dr. H. Burger has been recognised as *privat-docent* in Laryngology and Rhinology.

Basle.—Dr. Theodor Buri has been recognised as *privat-docent* in Dermatology.

Bologna.—Dr. Panzeri of Pavia has been recognised as *privat-docent* in Orthopædic Surgery.

Dorpat or *Iurieff*.—Prince Golitsyn has been appointed Extraordinary Professor of Physics. The announcement of the impending resignation of Dr. Dragendorff, which has appeared in both Russian and German journals, is now stated to be devoid of foundation.

Florence.—Dr. A. Marianelli of Pisa has been recognised as *privat-docent* in Dermatology and Syphiligraphy.

Heidelberg.—Dr. Eugen von Hippel of Halle has been recognised as *privat docent* in Ophthalmology.

Kharkoff.—Dr. Nikolai Lavrentievich Zalèski, Professor of Pharmacology, has been appointed Emeritus Professor.

Kieff.—Dr. Podvysotski has been promoted to the Ordinary Professorship of General Pathology, and Dr. Mitropolski of Moscow has been appointed Assistant Professor of the same subject.

Konigsberg.—Dr. Meschede has been appointed to the newly-established post of Extraordinary Professor of Psychiatry.

Munich.—Drs. Richard May and Max Cremer have been recognised respectively as *privat-docenten* in Medicine and Physiology. Dr. Tappeiner has been promoted to the Ordinary Professorship of Pharmacology. Dr. F. Voit has been recognised as *privat-docent* in Medicine.

Nancy.—M. Baraban has been permitted to exchange his chair of Histology for that of Pathological Anatomy.

Naples.—Dr. Pansini has been recognised as *privat-docent* in Medical Pathology and Clinical Medicine, Dr. Stanziale as *privat-docent* in Dermatology and Syphilography, Dr. Fornario as *privat-docent* in Psychological Medicine, Drs. Mauro and Antonelli as *privat-docenten* in Ophthalmology and Dr. Tzaversa as *privat-docent* in Experimental Pharmacology and Therapeutics.

Padua.—Dr. Cavazzani has been recognised as *privat-docent* in Physiology.

Paris.—M. Joffroy has been appointed Clinical Professor of Mental Diseases. The Professorship of Therapeutics and Materia Medica is officially declared to be vacant.

Pavia.—Dr. Giampietro of Naples has been recognised as *privat-docent* in Otology.

Philadelphia (*Medico-Chirurgical College*).—Dr. Webster Fox has been appointed to the chair of Ophthalmology.

St. Petersburg (*Military Medico-Chirurgical Academy*).—An announcement has appeared that no fresh students will now be accepted who have not taken honours on leaving the gymnasium; also that no married men or Jews will be allowed to enter.

Utrecht.—Dr. von Eiselsberg has been appointed Professor of Surgery.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Dr. A. Hartmann of Riga.—Dr. Eduard Bary, for many years Senior Ordinator of the Maria Magdalen Hospital, St. Petersburg. His death occurred at Baden-Baden on July 28th.—Dr. B. Luzzatto, Professor of Clinical Medicine in Palermo.—The deaths of Dr. Charcot and Dr. Blanche are alluded to elsewhere.

THE annual conference of the British Pharmaceutical Society was held at Nottingham on the 15th inst. under the presidency of Mr. Octavius Corder of Norwich. Twenty-seven years have passed since the members of the Society assembled at Nottingham. The Mayor gave a cordial welcome to the delegates on this occasion. The report, which was read by the secretary, gave a very favourable account of the prosperity of the Society, both numerically and financially. The President's opening address gave a synopsis of the plants used in the practice of medicine. He claimed that the Society had raised the standard of examination and in so doing had conferred great benefit on the public, since fewer errors had attended the dispensing of medicines.

THE seventeenth annual meeting of the American Dermatological Association is announced to be held at the Hotel Pfister, Milwaukee, on Sept. 5th, 6th and 7th, under the presidency of Dr. G. H. Fox of New York. Amongst the communications promised to be read at the meeting will be one by Dr. Radcliffe Crocker of London, the subject being "Lupus Erythematosus as an Imitator."

THE treasurer of the Hospital Saturday Fund announces the receipt of £13,000 as the result of the present year's collections in aid of the Fund. The proceeds from the recent cycling meeting at Herne-hill for the benefit of London hospitals reached the sum of £300. It is proposed to arrange a similar athletic display at Paddington with the same object in view.

THE steel screw steamer *Lachesis*, built for the Port of London Sanitary Authority for the purpose of the sanitary inspection of shipping in the lower reaches of the Thames and for the removal of cholera patients, is now finished. The cabin and sick berth fittings have been arranged by Dr. Collingridge, medical officer of health for the port of London.

DR. SONSINO of Pisa, who is investigating in Algeria the question of entozoal disease and in particular that of bilharzia, on behalf of the Italian Government, notifies us from Gafsa that the life history of the latter parasite resembles that of the holostomes, the intermediary host belonging to the class of arthropoda.

THE death is announced from Paris of Dr. Blanche. The deceased gentleman, who died at his private asylum at Auteuil, on Tuesday, Aug. 15th, was an authority on mental diseases and contributed many important communications to the Academy of Medicin.

THE sittings of the Hemp Drugs Commission at Calcutta are not yet concluded. There would appear to be great difficulty in obtaining evidence from persons likely to be able to throw light on the subject.

THE Derbyshire Royal Infirmary is in a fair way of being speedily completed, Mr. Walter Evans having made a conditional offer of £12,000 for the completion of the whole design.

NEW HOSPITAL SHIP FOR THE HUMBER.—The new hospital ship of the Hull and Goole port sanitary authority was on Saturday last taken to her station in the Humber roads between New Holland and St. Andrew's Dock. The ship will receive cases of infectious disease arriving from incoming ships and will accommodate the patients in two wards, running fore and aft, which will comprise twenty-eight beds and be fitted with all modern improvements.

CHOLERA.

CURRENT NOTES, COMMENTS AND CRITICISM.

THE epidemiologist, in relation to an epidemic of cholera, stands very much as does the meteorologist in relation to storms. He has to institute a comparison between the records of previous epidemics and those of the present time, and, although nothing happens by accident (what is put down to accident is only the result probably of our ignorance of all the factors and of their relative intensity), all deductions derived from instituting a parallel between the past and the present are necessarily as imperfect and incomplete in the one case as in the other. The meteorologist knows the general laws and has tabulated the results of previous experience; but he does not know the initial velocity, as it were, of all the forces and he cannot tell with certainty the extent to which any given storm may prevail or the limits within which it is to be circumscribed. So it is with cholera; its natural history impresses the mind with a conviction that there must be some general condition favourable to the development of an epidemic for the disease to spread with epidemic force when it reaches and is introduced into a country, otherwise it would not start and pursue a definite course at one period and remain dormant and inactive at another. Apart from its introduction there must be certain conditions present for it to germinate and develop into an epidemic, and it is the province of the sanitarian to discover what are the modifiable conditions in this respect and to point them out with a view to their modification or removal if possible. His labours are not, in any case, thrown away, for they are influential and operative for good in all diseases alike—especially in the case of all epidemic diseases. A good water-supply free from contamination, an efficient system of drainage and wholesome dwelling-houses safeguard the community against disease all round. People who do not believe in these things or sanitation generally, or who do not care to spend their money in these directions, repose all their trust and confidence in quarantine. They think that if they can only exclude the introduction of a case of cholera, for example, they are safe, notwithstanding any amount of dirt in which they may be living; but even were this so—and some persons, at any rate, do not admit it—the task is simply an impracticable one. All intercourse would be cut off and life would be intolerable under the conditions necessary to secure it. An epidemic of cholera lasts, from start to finish, about three or four years, as we have said; but we do not know how far any given epidemic is destined to reach when it has once started. We have had cholera marching from India to Russia, and either extending from that country—or, as some think, from Havre—to Hamburg, and the disease was existing in France before it appeared in Hamburg and is still prevalent to some extent in that country at the present time, but it has not yet taken any root in this country. If the disease does not appear here before October we may reasonably hope and believe that we shall be saved from an epidemic—as far as this year is concerned at any rate.

With regard to the actual cause of cholera and the direction in which we can best apply our measures of prevention, we may usefully call attention to the latest views on the subject. Our readers are acquainted with Professor von Pettenkofer's theory which, formulated mathematically, is that $x+y+z$=cholera attacks. With the majority of epidemiologists he accepts Koch's cholera bacillus as the x and the local conditions as y. The relative importance of x and y is, says Dr. Thorne Thorne in his *brochure*, "Cholera Prospects and Prevention," largely one of place and circumstances. For England and most temperate countries the essential danger lies in the importation of the cholera bacillus and, "so far as the epidemic diffusion of cholera is concerned, specific pollution of water services constitutes for us the greatest danger." It may be remarked, by the way, that the first case of cholera admitted into the Hamburg hospital was on Aug. 16th of last year.

With regard to our weekly chronicle of the progress of cholera we may commence with the news from St. Petersburg as to the increasing prevalence of that disease in the provinces of Russia. The official figures from St. Petersburg on the 13th inst. were as follows: Podolia, 484 cases and 175 deaths; Orel, 327 cases and 110 deaths; the Don Province, 354 cases and 147 deaths; Kieff, 290 cases and 91 deaths; Grodno, 110 cases and 27 deaths; Nijni Novgorod, 258 cases and 102 deaths; Kherson, 50 cases and 18 deaths; Yaroslav, 89 cases and 15 deaths. Samara, 31 cases and 8 deaths; Vladimir, 23 cases and 5 deaths; Kazan, 39 cases and 13 deaths; Moscow, 27 cases and 9 deaths. In the city of Moscow there are about 30 cases and 15 deaths daily. The epidemic prevails in a milder form in the provinces of Bessarabia, Volhynia, Minsk, Simbirsk, Viatka and Kharkoff. The disease was somewhat increasing at Moscow; there were 86 fresh cases admitted to the hospitals on the 12th inst. and 52 deaths reported. The returns of the 16th inst. from St. Petersburg show that there were 166 fresh cases and 67 deaths in Moscow from the 8th to the 12th inst.; 1 fresh case and 1 death in Warsaw, and 96 cases and 22 deaths in the government of Grodno, from Aug. 6th to Aug. 12th; 134 cases and 39 deaths in Samara, from July 30th to Aug. 5th; and 317 cases and 157 deaths in the Don Territory, from Aug. 10th to 12th.

The rapid spread of cholera in the countries east and west of Germany has been carefully and anxiously watched at Berlin. It is stated, moreover, in the *Reichsanzeiger*, that some cases of diarrhœa had broken out among the Polish workpeople at the East-end of Berlin and that bacteriological examination of the dejecta had shown three of the cases to be those of Asiatic cholera. These three cases are believed to have been traced to the consumption of provisions imported from infected places in Russian Poland.

From Vienna we learn that cholera continues to prevail in Braila (Roumania), that the disease had broken out amongst the workmen on a railway from the Hungarian town of Marmaros Szigent to the Galician frontier, and that cases of cholera had occurred at Nadvorna, at Kolomea, Delatyn, Dobrotoff, Tanoff and other places. The steamer *George Fisher*, arriving at Malta on the 10th inst. from Ibraila, reported 3 cases of cholera on board, 1 fatal. Cases are also reported at Tiulukoff, in the district of Sniatyn, Galicia, and from Budapest as occurring in the town of Szolnok and the neighbouring villages on the banks of the river Theiss. The epidemic is spreading in Galicia. A rumour that a case of cholera had occurred at the big military camp at Bruck is contradicted. The health at Bruck and Vienna is good.

The official returns from Bucharest show that fresh cases are still occurring at Ibrail, Soulina and Czernavoda.

Several cases have occurred in Holland, but they are mostly considered to be cases of cholera nostras. The cases that have arisen have been in the province of Utrecht and in that of Guelderland, where a fatal case occurred at Neerbosch.

The disease still prevails in Naples. The Anchor line steamer *Karamania*, which arrived at New York from Naples on the 4th inst., had some cases of cholera during the voyage, and on the 14th inst. it was reported from Philadelphia that 20 cases had since occurred at the New York quarantine station, 3 of which were fatal. There had been an increase of the disease at Barra and some fatal cases had occurred at Fossato in the province of Campobasso. According to the *Popolo Romano* a case or two of suspected cholera had occurred at Rome.

We have no official information as to the prevalence of cholera in France.

CHOLERA IN THE DANUBE.

(FROM AN OCCASIONAL CORRESPONDENT.)

THROUGH a friend I have already sent you a few remarks about the cholera epidemic which is now trying to extend its course southwards. In this town (Constanta) we are very healthy and considerable attention is being paid to clearing away all cause of filth diseases. In addition, all unripe and over-ripe fruit are prohibited and if introduced for sale are immediately confiscated. Several wells have been closed. A cholera hospital has been extemporised capable of accommodating about twelve patients. The streets are twice a day watered from a large two-horse patent watercart with sea-water, and all dust and rubbish &c. are cleared away continually from the streets by a well-organised corps of scavengers; all the Turkish caffirs and sleeping houses have been cleared out and thoroughly cleansed and disinfected, and all hotels and private houses have supplied themselves with quantities of disinfectants, which they pour not only down the waterclosets but over their passages and about their rooms &c. I must say that the Roumanians of the present day are most ardent believers in the efficacy of disinfectants. Our bathing season had begun and the prospect of a good harvest for the hotels and lodging-houses was almost certain; but now things are changed. The great influx of bathers has stopped and those that had already arrived have begun to return home. Cholera is serious at Soulina. This is ninety-eight miles north along the coast from Constanta. A Greek steamer has just arrived from there to load compressed hay for Germany; very rightly it has been forbidden to remain. Deaths are occurring at Czernavoda. This is the Danube terminus of the Danube and Black Sea Railway, forty miles from Constanta (Kustendji). Some reports say the disease is pernicious fever, others choleroform, others gastro-enteritis, others dysentery &c.; but I should say that if all these said complaints were well sifted cholera would be the outcome. There is no shutting one's eyes to the existence of the disease at Braila, Soulina, in Bessarabia and in the country near the Pruth, from which parts it can very easily be introduced into Constanta. It is therefore very foolish for many people, as several do here, to talk lightly of the complaint and to neglect the necessary precautions. Again, with many here cholera forms the chief topic of conversation. This is very unwise, as it is sure to create great moral depression and fear. Cases of gastro-enteric catarrh are frequent here, but are very slight. The usual summer infantile diarrhœa is also in existence, but is mild. No other complaint prevails so far.

THE

BRITISH MEDICAL ASSOCIATION.

MEETING AT NEWCASTLE-ON-TYNE.

THE following reports arrived too late to be included in our account of the proceedings of the Sections in our last issue.

DERMATOLOGY.

Surgical Treatment of Lupus.

Mr. BIDWELL read a paper on the Surgical Treatment of Lupus, in which he drew special attention to the treatment by free excision, combined with skin grafting, by Thiersch's method. He had operated on four cases in this way, in one of them removing a lupus with a superficial area of thirty square inches. Three of the cases were perfectly satisfactory, the new skin being supple and the scar slight; in the fourth case a slight recurrence had appeared six months after the operation. In all the cases the lupus had existed for over fourteen years, in spite of various treatments. The dissection was carried down to the deeper part of the subcutaneous fat. He pointed out that, as the lupoid tissue extended to the deeper layers of the cerium and as sometimes the subcutaneous fat was altered and adherent to the lupus, free excision gave the best hopes of permanent cure, and that this method without skin grafting was impracticable except for very small patches. The method of operating was described, special stress being laid on the uses of antiseptics. The wounds usually healed within a fortnight, no after-treatment being necessary. The cicatricial contraction after the operation was neither excessive nor unsightly. Reference was made to cases operated on in this way by Messrs. Bruce Clarke and Watson Cheyne.

The Treatment of Ringworm of the Scalp.

The secretary of the Section (Dr. ALLAN JAMIESON, in the absence of the writer) read the following notes of a paper by Dr. Alder Smith of Christ's Hospital. Dr. Alder Smith thought that the treatment of extensive ringworm was still most unsatisfactory, as many cases resisted all remedies for many months or even years. The new remedies suggested during the last ten or twelve years were no better than the old ones. It was not new "parasiticides" which were required, but some reliable means of bringing them into contact with the deeply situated fungus. His experiments during the last few years had been conducted with different vehicles, but he had not been able to find any ointment, base or liquid to be relied on to penetrate to the bottom of the hair-follicles and hairs and thus to bring the fungus within reach of the lethal agent. For some time it had appeared to him that chronic ringworm was rarely eradicated by bringing the so-called "parasiticides" into contact with the fungus, but whilst their use was essential in preventing the spread of the disease such cases were cured by producing some alteration in the nutritive condition of the skin so that the diseased hairs were shed, leaving an artificial alopecia, or by causing irritation and exudation into the hair-follicles. The chief reason for this assertion was the fact that hairs once invaded by the trichophyton tonsurans never recovered under the use of parasiticides and thus grew up again in a healthy condition. After twenty-three years' experience in treating a very large number of cases of ringworm he was still of the same opinion as when he wrote to THE LANCET in January, 1880, strongly advising croton oil as the best irritant for attempting the artificial production of "kerion," or at least of sufficient exudation into the follicles to cause the diseased hairs to be thrown off with the discharge. It was necessary that the greatest attention should be paid to the details of this treatment. A most important detail was that a parasiticide, such as carbolic glycerine (1 in 8), should be freely used and the places should be bathed and poulticed constantly day and night so that no scabs formed. The treatment of that variety of the disease called "disseminated ringworm" was to cause each stump to be thrown off by individually needling each hair follicle with a properly-shaped fine needle dipped in croton oil containing an eighth part of carbolic acid. If this caused too much pustulation creascte might be used.

Erythema and Urticaria.

The Secretary read for Dr. H. RAMSAY SMITH, who was absent, a paper on a definite form of skin disease allied to erythema and urticaria. The paper gave a record, founded on a study of nearly fifty cases, of a skin rash associated with considerable constitutional disturbance, exhibiting certain definite though diverse local manifestations and lesions, accompanied by intense itchiness of the parts affected, running a definite course, tending to recur in patients susceptible to it, and appearing almost epidemically in certain localities.

Dr. J. J. PRINGLE remarked on the occurrence of urticarial eruption in several members of a family without assignable cause, as a known clinical fact.

Psoriasis.

Dr. RADCLIFFE CROCKER opened a discussion on "The Etiology and Treatment of Psoriasis."

Dr. MAPOTHER said he had read a paper in that Section three years ago supporting the theory that psoriasis was parasitic, and he now proposed to urge the same view in a very few words from further experience and reflection. That the microbe spread by the circulation would appear from the frequent symmetry, the occasional rapid and extensive diffusion of the eruption and the dilatation of the capillaries which did not characterise the local parasitic diseases such as the tinea. It was, however, most probable that the parasite lurked in such common and inveterate sites as the hard, scaly skin of the knees and elbows, where the blood and its leucocytes did not freely circulate. Every day they had further proofs of the parasiticidal power of mercury and a good many cases of its usefulness by inunction or internally in psoriasis, pushed slowly to mercurialism and continued after apparent cure, had been observed by him and some professional friends since his last communication. The lesser

proportion of relapses than under other modes of treatment was also most encouraging.

Dr. ABRAHAM referred to 355 cases of psoriasis occurring amongst 3700 hospital patients during the last two years—a proportion of 9·5 per cent., which was much greater for psoriasis than that usually given in this country. As regarded sex, 133 were male and 222 female—an experience very different from that of other observers up to the present. It appeared that the males largely preponderated abroad. In this country a patch of psoriasis might be disregarded by the ordinary man of the hospital class, whilst a woman might consider it of sufficient importance for treatment, and so the statistics might be to some extent vitiated; but it could not be supposed that English women were more vain of their skin than were French women. One point of interest shown by the notes was that psoriasis must really be regarded as a disease of early life; no less than 90 amongst 288 cases, in which the age of onset could be arrived at—or 37 per cent.—having commenced in childhood or under thirteen years of age. Several of the patients were five years old or younger, one being only two years old. As regarded heredity, 59 admitted that relatives were, or had been, affected. If they admitted a possible parasitic (as yet unproved) origin for the disease, it must be only the tendency to contract the disease or the nature of the soil in which the germs would grow that was perhaps hereditary. In reference to contagion, he alluded to one case in which the patient attributed her disease to having bathed in the same bath which a brother had used who had "brought the disease from school." Thirty-five of the cases showed evidence of bad health or defective nutrition and 5 were markedly neurotic. In reference to treatment, he was sceptical as to the value of arsenic; he relied chiefly on tar and on ointments, lotions and baths. He called attention to the sections exhibited by him in the Museum in which there were a myxomatous appearance of the enlarged papillæ and changes in the corneous stratum.

Dr. LESLIE PHILLIPS said that with regard to the seismal recurrence of the disease in connexion with the theory of causation they must remember the seismal recurrence of mushrooms, and in reference to the yearly relapse of the disease they might remember the proverb "Once a mushroom field, always a mushroom field." He had a case in which this year's psoriasis appeared at the periphery of a sepia-coloured patch the area of last year's plague, and which in its evolution followed the outline of the pigmented patch, but did not extend into its area. This seemed to indicate that the influence of anti-parasitic treatment lasted in some cases for a considerable time.

Mr. PEEKE RICHARDS said that as regarded the neurotic origin of psoriasis he was much struck with the number of cases of psoriasis which occurred in the female patients under his care whilst medical superintendent of the Hanwell Lunatic Asylum, and that the skin disease appeared much more frequently in cases of perverted nervous action, such as delusional insanity &c., than in those of lessened nervous force, such as dementia &c. This circumstance tended somewhat to point to the neurotic origin of the complaint.

Dr. NORMAN WALKER said that he inclined to the parasitic view and he thought that the circular spread of the disease was in favour of that view. He thought that the iodide treatment was not properly understood; a large dose in this country means fifteen to thirty grains. The dose of iodide recommended in psoriasis was 100 to 200 grains thrice a day, utterly beyond the pockets of any hospital patient.

The other speakers were Dr. J. J. Pringle, Dr. Eddowes, Dr. Stopford Taylor and Dr. Thin; and Dr. Crocker replied.

Thyroid Feeding in Psoriasis.

Dr. BYROM BRAMWELL read an important paper on Thyroid Feeding in Psoriasis, detailing several cases, and showed photographs of the patients which indicated marked improvement after an extensive preliminary desquamation.

Dr. SYMONS ECCLES cited a case of long-standing psoriasis in which injections of von Poehl's spermin had apparently resulted in reducing the severity and spread of the eruption. If von Poehl was right in his theory of the therapeutic action of spermin as an oxidising agent, it might be that the animal extracts now so largely employed depended for their value on the presence of an oxidising ferment which might yet be isolated.

Rodent Ulcer.

Dr. NORMAN WALKER thought that all must admit that text-book descriptions of rodent ulcer were inadequate. There was always a pre-ulcerative stage. Under the microscope the growth appeared as a glandular carcinoma. He found no evidence of its origin from the rete, but much for its origin from the sweat glands and ducts and possibly, but only rarely, from the sebaceous glands. The appearances of sections were in favour of this view, and he did not understand how it could be confounded with squamous epithelioma. If every growth clinically diagnosed as rodent ulcer were accepted as such by the pathologist then difficulties undoubtedly arose. The clinical diagnosis was often impossible. He believed that metastases were commoner than was supposed. The only rational treatment was with the knife, the scope of which had been greatly enlarged by the improvement in methods of skin-grafting.

Dr. BROOKE doubted whether the growth did not at times spring from the rete directly as well as from the sweat glands, columns extending downwards from the rete being apt to simulate sweat ducts. He supported the thorough use of zinc chloride paste as a substitute for erasion or excision where the disease was inaccessible to plastic operation.

Dr. PRINGLE asked Dr. Walker whether he could lay down any definite points to aid differential diagnosis between rodent ulcer and epithelioma.

Dr. LANZ of Berne had seen recurrence of rodent ulcer in transplanted skin after burning. He quite agreed with Dr. Walker in his statement that the knife and not caustics was indicated in cases of rodent ulcer.

Mr. D'ARCY POWER inquired whether Dr. Walker could explain the frequent occurrence of rodent ulcers in parts where the sweat glands were not large or likely to undergo marked changes, as he understood that he had said that rodent ulcer was a cancer of the sweat glands. He also asked what minute intercellular changes occurred and what reagents he had found to be most useful.

Dr. WALKER briefly replied.

Massage in Diseases of the Skin.

Dr. A. SYMONS ECCLES, in his paper on the above subject, dealt with the direct and indirect effects of massage on the healthy skin, the local effects produced by different manipulations of the skin only, and how these were modified by deeper manipulation of underlying tissues also. He pointed out that the local effects of massage varied with the character of the manipulations, and he proceeded to discuss these in reference to the muscular, nervous and vascular supply of the skin in health. The modifications of surface temperature and tactile sense produced immediately by each manipulation and by daily massage were briefly recorded. The paper concluded by directing attention to the application of these effects of massage to the therapeutics of skin affections and to the diseases in which it has been employed.

Tinea of the Nails.

Mr. DAVID WALSH gave the following particulars of a case of Chronic Tinea of the Nails in an adult. The disease had lasted for over two years and affected all the nails of the left hand, with the exception of that of the ring finger. The invaded nails were broken down, discoloured, and ridged like whale-bone. There was a clear history of primary infection from a barber's razor, with secondary invasion of the back of the hand and finally of the nails. The nails of the right hand were unaffected.

Dr. PHINEAS ABRAHAM alluded to the interest of Mr. Walsh's case, tinea of the nails being so rare in adults. He had seen the case, examined the nails microscopically, and found abundant mycelium—evidently a trichophyton megalosporon. As regarded the treatment of chronic ringworm of the scalp, he referred to a note he read last year at Nottingham in which he advocated an ointment containing salicylic and carbolic acids, of each three grains to one drachm, to an ounce of vaseline. That he had found very useful in a routine application, particularly in out-patient hospital practice, where it was difficult to induce the patients to carry out details of elaborate or disagreeable methods of treatment. He referred to the fact that he had often observed large and succulent growths of spores in cases of tinea, especially in spring; and in the light of Dr. Sabouraud's observations this might be accounted for by supposing that the animals from which the trichophyton megalosporon came were the more prone to have their special forms of tinea.

MUSEUM AND EXHIBITS.

The exhibition, which year by year forms so attractive a feature of this annual gathering of medical men, was in no way behind the average so far as the arrangement or the

excellence and variety of the exhibits were concerned. We cannot pretend to give any detailed account, but the following *résumé* may broadly indicate to our readers some of the noteworthy exhibits.

Pathological Museum.

A visit to the Pathological Museum well repaid those interested in pathological work. Dr. Sheridan Delépine exhibited a series of dissected guinea-pigs, showing the stages and channels of infection in tuberculosis after subcutaneous inoculation in the leg. These showed very clearly the involvement of the popliteal, superficial and deep inguinal, sublumbar, retro-hepatic, mediastinal, bronchial, subscapular and deep, inferior, cervical, lymphatic ganglia, and also of the spleen, liver and lung. Dr. Delépine also exhibited a number of microscopes, illustrating the morphological characters and staining reactions of psorosperms obtained from the rabbit's liver, intestine &c., and various methods of cultivation of these bodies. Various stages of development were shown up to the production of falciform bodies. He also showed micro-photographs of the specimens referred to and of some intra-cellular structures from cancer for comparison. Dr. G. R. Murray exhibited a number of pathogenic organisms. Dr. C. H. Cattle exhibited a series of beautiful microscopic specimens to illustrate the stages of the intra-cellular psorosperm-like bodies in cancer and a beautiful series of micro-photographs taken by Dr. Millar of Nottingham illustrating the same subject. Dr. Norman Walker showed sections of adenoma sebaceum and rodent ulcer. A beautiful series of sections of eyes was exhibited by Mr. Juler, Mr. Hartridge, Mr. Griffith and Dr. A. S. Percival. Dr. R. M. Buchanan exhibited drawings of a widely generalised case of melanosis affecting bones and viscera. Dr. Murray of Newcastle exhibited a number of photographs illustrating myxœdema and the results of its treatment. Drawings of skin diseases were exhibited by Drs. Phineas Abraham, Allan Jamieson and S. Stirling and Mr. Hutchinson. Dr. Maclaren of Carlisle exhibited a beautiful series of plasters in gelatine paraffin and plasters of ovarian and parovarian cysts which had been removed by him. Drs. G. A. Gibson and R. Muir showed microscopic specimens of atrophy of muscle tissue and fibroid change in the left ventricle as the consequences of stenosis of the left coronary artery. Professor Grainger Stewart and Dr. G. A. Gibson showed sections of the thyroid gland in Graves' disease, in which gland hyperplasia was present, together with interstitial changes and the disappearance of colloid material; they also exhibited sections of the medulla, showing hæmorrhages in the floor of the fourth ventricle in the same disease. There was further a large selection of very beautiful pathological specimens taken from the museum of the College of Medicine. Microscopes and cultures of trichophyton megalosporon from man and the horse and of trichophyton microsporon were shown by Dr. Sabourand, and two microscopes illustrating the same organisms were shown by Dr. Allan Jamieson. In the Physiological Laboratory Dr. Mott of Charing-cross Hospital showed an excellent series of microscopical specimens illustrating degeneration of nerve fibres of the central nervous system and phagocytosis after such lesions. An ossified tendo Achillis was exhibited by Dr. R. W. Reid of Aberdeen.

Surgical Instruments.

In the division of the museum devoted to instruments one of the main features was that most of the firms exhibiting are now making their surgical instruments on the aseptic principle—knives, scissors, forceps, saws and other instruments being constructed of solid steel and to take to pieces, so that if necessary they can be boiled and can always be thoroughly and readily cleansed. Pocket cases are made of metal, such as aluminium, German silver &c., and larger cases of amputating instruments or special sets have the instruments fitted into metal frames in a metal tray, which can be immersed in an antiseptic fluid. Aseptic needles forged entirely of solid steel and nickel-plated were on view. Messrs. Down Bros. had on view some large retractors made with concave blades, giving more space internally and externally, and throwing the pressure on to the body of the blade instead of the edges. The largest retractors were those named after Morris and Maunsell, the latter being fenestrated. They also showed Pozzi's needle-holder and osteotomy saws, including Macewen's set for laminectomy, to fix at any angle, and comprising two saws and two rasps, an ingenious instrument for removing plaster jackets, and Jordan Lloyd's aseptic combination scalpels, with scoops or with curved or straight dissectors, which are used variously in the ligature of arteries, exposure of nerve trunks, removal of tumours near large vessels or in dealing with tuberculous lesions &c. Messrs. Mayer and Meltzer exhibited two new forms of ether apparatus and some recently introduced instruments for dealing with nasal obstructions, as well as Delstanche's and Major's knife for nasal spurs. Mr. Krohne, of the firm of Krohne and Sesemann, had a stand for displaying his regulated inhalers for the administration of chloroform. A great saving of chloroform is claimed to be effected by this method, as the inspired air is never charged with more than 3½ per cent. of the chloroform vapour, twenty minims of chloroform being sufficient to produce anæsthesia in most patients. The condition of the respiratory process is indicated by a feather that is attached to the mask. Krohne's regulated dropper and plane cone were also shown. Messrs. Joseph Wood & Co. showed a flat glass tongue depressor for use in syphilitic subjects and fever cases. It can be cleansed by immersion in boiling water. They showed also an improved eye-drop bottle and a cataract knife which could be set at any angle. Mr. John Richardson exhibited a regulated glass powder insufflator, a spring tape measure marked on one side with the ordinary English measure and on the other with the French metric scale, a laryngeal spray-producer with tongue depressor, a flexible celluloid Eustachian catheter, a flexible wire splint and a boxwood iodoform dredger. The exhibits of Messrs. Arnold & Son comprised Hellier's immediate perineorrhaphy case, a new nasal ointment introducer, a new intra-uterine applicator, Lewis Jones' instrument for the electrolysis of nævi, Walsham's nasal scissors and forceps for correcting deformities of the nose, Gardner's phimosis dilator, Munn's injector bougie, Laurie's stricture dilator and Duke's self-retaining vaginal speculum. Messrs. Allen & Hanburys had a stand for the first time for surgical instruments. They now manufacture their own instruments. Messrs. A. Hurst and Co. showed, besides a great variety of various electrodes, sledge coils, constant current batteries and electric lighting instruments, a large thermo-electric pile by means of which it was possible to obtain a current for working several large faradaic coils directly from the heat of a Bunsen burner, thus obviating the necessity of batteries. An electro-mechanical vibrating apparatus for the treatment of neuralgia was also exhibited. There were also several complete apparatus which make it possible to utilise the electric current as derived from the mains for all medical purposes, including electrolysis and constant current application. The accumulators exhibited at Newcastle can, it is stated, be used for the cautery, for surgical lamps, electrolysis and for driving motors. Their use as motors was illustrated on the occasion of Professor Victor Horsley's lecture on cerebral diseases, when Hawksley's mechanical saw was driven by a current far exceeding the normal output. Messrs. Salmon, Ody & Co. displayed appliances mainly consisting of artificial limbs, spinal jackets and their self-adjusting trusses. These trusses were exhibited in different forms—viz., inguinal, femoral, umbilical, scrotal and prolapsus. Amongst other features introduced were a grip tourniquet, a patella truss and a self-adjusting belt.

Food and Drugs.

The largest interest was shown, so far as the exhibits were concerned, in the department of food and drugs, which was contiguous to the reception-room. The exhibit of Messrs. Burroughs, Wellcome and Co. was a very large one, covering a space the entire length of the room and containing amongst other articles the Kepler extract of malt, the Kepler solution of cod-liver oil, lanoline and lanoline toilet preparations, hazeline and hazeline cream, Fairchild digestive ferments, zymine, pepsin, zymine peptonising powders, glycerine suppositories (hollow cones of cocoa-butter filled with glycerine), and zyminised meat and milk suppositories for rectal feeding. They displayed various forms of emergency cases fitted with tabloids of compressed drugs and concentrated medicines. The Congo medicine chest, as carried by Mr. H. M. Stanley in each of his expeditions, was shown. Various animal extracts in the experimental stage were shown—viz., extract of supra-renal capsules, extract of the cortical portion of pig's kidney and glycerine extract of pancreas. Interesting experiments were performed showing the rapid disintegration of tabloids of insoluble drugs. Mr. B. Kühn showed papain. His other exhibits comprised photographs of the tree and fruit, preserved fruit of the carica papaya, the dried juice and the finished product, and a collection of medicated preparations, such as lozenges, pills, tablets, solution in acid glycerine, and compositions with

ridin, bismuth and cascara sagrada. He also showed a means of administering ethyl chloride for the production of local anæsthesia in dental and minor surgical operations. A new anæsthetic—anestile—is contained in nickel-plated copper cylinders, which are capable of holding a quantity of liquid sufficient for from thirty to forty operations. Messrs. James Robertson and Co. showed a large assortment of medicines exhibited in the flexible gelatine capsular form. Amongst others were capsules containing the plain Blaud's mass and numerous combinations, such as with arsenic, aloes, quinine, nux vomica &c. Other capsules contained sulphonal, Gregory's powder, Easton's syrup and cascara, plain and in varied combinations. They also exhibited granular preparations and fluid extracts, amongst which was a preparation of quillise. Messrs. Hertz and Collingwood exhibited the Franz Josef natural purgative water. They also showed specimens of the two Levico springs of South Tyrol, representing the two strengths of this natural arsenical ferric water, as well as specimens of their refined cod-liver oil, Jensen's brand, and a new coca tonic champagne specially prepared for them. The Liquor Carnis Co., Limited, exhibited not only the finished products but the process of manufacture in its various stages and the different ingredients used during the process. In the case of virol they showed how the salts of calcium and magnesium were obtained from the egg-shell, also specimens of marrow bones from which the marrow, gelatine &c. had been extracted, the entire eggs, maltose and glucose. Unchanged beef juice preparations and the pressed beefsteaks were likewise shown. The firm of Messrs. Oppenheimer, Son and Co., Limited, exhibited their palatinoids. Specimens of the empty discs were shown, together with palatinoids containing sugar, as also a huge model of the bipalatinoid with its dividing septum. Cream of malt with cod-liver oil and hypophosphites, liq. euonymin et pepsine co., and liq. caulophyllin et pulsatillæ co. were also shown. Messrs. Christy and Co. exhibited analgen, which is a derivative of quinoline. As a centrepiece to their stand they exhibited the Morstadt cachets, shaped out of rice paper and made to encase nauseous or insoluble powders. Antrophors, or bougies with a spiral, smoothly-coated spring running down the centre, were also shown. Amongst other exhibits were adeps lanæ, "N. W. & K.," an anhydrous wool fat, with a low melting point; Christia and fibrine Christia, a substitute for oiled silk; as well as cactus grandiflorus, euphorbia and numerous fluid extracts and tinctures and kola preparations. The stand was decorated with growing specimens of strophanthus hispidus and kombé, catha edulis, erythroxylon coca, and herculia acuminata or kola. Messrs. T. Howard Lloyd and Co. showed pearl-coated pills arranged upon a centre stand, upon each side of which were two smaller stands, the one containing vases of granular effervescent preparations and the other compressed tablets. The intermediate spaces between these stands were covered with medicine chests, made both of wood and leather; and upon each side of the large centre stand, close to it, were two circular glass stands filled with bottles of tablets, hypodermic cases, boxes of peppifer and many other exhibits. This firm also introduced Dr. Unna's plasters spread upon thin waterproof sheeting. These gelatine plasters were shown in various forms, such as oxide of zinc, ichthyol and oxide of zinc, boric acid, chrysophanic acid, iodoform and salicylic acid.

At the stall of Messrs. W. R. Warner and Co., represented by Messrs. Newbury, were exhibited specimens of bromo-soda, ingluvin prepared in different ways, and a selection of parvules. Messrs. Brady and Martin had a stall on which they exhibited many preparations of drugs and other medical requirements. The Camden Hill Pharmacy distributed samples of the chirata liquida, a glycerine solution of the two bitter principles of chiretta. Sanitary preparations were also abundantly in evidence. The Sanitary Wood Wool Company had a large display. Jey's sanitary compounds for toilet and hygienic purposes were well displayed, as were also those shown by the Sanitas Company. A feature of the exhibits was the preparation of milk shown by the Aylesbury Dairy Company, and there were also displayed the preparations of the Anglo-Swiss Condensed Milk Company. The Cadbury Brothers' stall received a considerable share of attention. On it were exhibited samples of cocoa in the various stages of its manufacture. Messrs. Feltoe and Smith displayed preparations of lime juice in various forms. Several samples of pure chloroform were exhibited by Messrs. Macfarlan and Co., Messrs. Salomon and Co., and Messrs. Duncan, Flockhart and Co. Messrs. Macfarlan also showed various antiseptic dressings, bandages and other surgical requisites. Messrs. C. H. Hewlett and Son displayed some new drugs and chemicals and improved pharmaceutical and antiseptic preparations. Messrs. Parke, Davis and Co. showed hypodermic cases, syringes and tablets for hypodermic administration and some food preparations. Messrs. John Wyeth and Brother exhibited preparations of digestive ferments and compressed ophthalmic discs and drugs in various forms. Amongst the Mineral Waters which were exhibited were those of the Apollinaris Company, the Johannis Brunnen Company and Carlsbad mineral waters, the agents of which latter are Messrs. Ingram and Royle. As is usual in exhibitions of this kind considerable space was devoted to a display of concentrated foods and foods which have been variously prepared by certain medicaments to suit the requirements of invalids. Messrs. George Mason and Co. displayed a great variety of foods of this kind; Messrs. Brand and Co. showed their meat juices; Messrs. Lorrimer and Co. had a good display, and so likewise had the Bovril and Bovinine Companies respectively. Messrs. Carnrick and Co.'s preparations were exhibited in conjunction with those of the Maltine Manufacturing Company. Another group of foods were those represented by Nestlé's milk food, Meilin's food and Frame Food. Mr. H. B. Chibnell exhibited biscuits variously prepared for invalids. The members of the Association and others had facilities afforded them for having their manuscript type-written free of cost by Mrs. Marian Marshall of Cambridge and Miss E. M. Howard of London, representatives of the Remington Typewriter Company. Messrs. Allen and Hanburys exhibited specimens of their malt extract, Bynin and Bynol, and several preparations of cod-liver oil, besides many other pharmaceutical preparations.

Sanitary and Ambulance Appliances.

Messrs. Atkinson and Philipson contributed to the Museum Department a complete exhibit of vehicles for ambulance work. They showed three four-wheeled vans for horse power and a number of hand ambulances and stretchers as designed and made by them for various services. One was the Philipson ambulance van, which had been ordered by the guardians of the Strand Union, London. The van built to the order of the Wallsend and Willington Joint Hospital Board was of the St. John pattern. Messrs. Atkinson and Philipson have fitted air wheels to several chairs, to show that any necessity for springs or a heavy under-carriage is removed.

REPORT OF THE COMMITTEE ON THE REGISTRATION OF MIDWIVES.

THE following is the complete report of the Select Committee appointed to consider the question of the compulsory registration of midwives:—

Your Committee has sat four times and has taken most valuable and important evidence, which, with that given last year at six sittings, includes that of distinguished medical men and women in various spheres of practice both in town and country and also from trained and experienced midwives from various districts.

Your Committee are of opinion that a large number of maternal and particularly infant deaths as well as a serious amount of suffering and permanent injury to women and children is caused from the inefficiency and want of skill of many of the women practising as midwives without proper training and qualification. They find that amongst the poor and working classes both in the country and in towns the services of properly trained midwives have been eminently successful and of great advantage to the community. As proved by the evidence before your Committee, the services of midwives are a necessity, and consequently every precaution should be taken to discourage the practice of women who are ignorant and unqualified.

Your Committee are of opinion that by legislative enactment no woman should be allowed to call herself, or to practise as a midwife except under suitable regulations, but that the term "Registered Midwife" should be protected and restricted to those who have been properly trained, and who alone should be placed on the "Midwives' Register;" and that the vested interests of untrained midwives should be efficiently protected by inserting, in any future Bill, a clause

to the effect that any woman who produces evidence that she is in practice as a *bonâ-fide* midwife at the time of the passing of the Act shall, without formal registration, be allowed to continue her calling under the term "Midwife" alone, but shall not be permitted to assume any other title whatsoever.

Your Committee, therefore, recommend that a system of examination and registration of midwives should be established and that for the purpose of admission and examination of women desiring to act as midwives the General (Medical) Council shall be invited to frame rules for regulating—

(1) The admission to the Register either by (*a*) practice, or (*b*) examination, or by both; (2) the conditions of admission to such examinations; and (3) the conditions of such examinations.

These rules and regulations should, in the opinion of your Committee, be subject to confirmation by the Privy Council, and in the event of the General Council failing to make such rules as the Privy Council can confirm your Committee recommend that the Privy Council should invite some other medical body or forthwith cause the rules and regulations proposed in the foregoing paragraph to be framed for the purposes required, and that such rules shall take effect as if they had been made by the General Council and confirmed by the Privy Council.

Your Committee also recommend that the duty of carrying out locally the provisions of the Act that will be required should be placed in the hands of the county councils. They also are of opinion that greater facilities for the study of midwifery should be provided in workhouses and lying-in hospitals.

In conclusion, your Committee desire to refer to the apprehension expressed by certain witnesses belonging to the medical profession lest their interests might be injuriously affected by an improvement in the status of midwives. The great preponderance, however, of medical and other evidence, having regard both to the authority and number of the witnesses, was to a contrary effect. Your Committee, therefore, whilst giving due consideration to the expression of such fears, believe that the suggested injury is not likely to prove serious, and they are of opinion that medical men will not only be relieved of much irksome and ill-paid work, but also that improved knowledge on the part of midwives will induce them to avail themselves more frequently and at an earlier stage than at present of skilled medical assistance in time of emergency and danger. On this point your Committee had full and substantial evidence.

A THIRTY YEARS' WAR AGAINST DISEASE.

PROFESSOR MCKENDRICK delivered the Graduation address to the medical and surgical graduates of the University of Glasgow on July 27th last. In the course of his address Professor McKendrick said: "The day of your graduation is one to which you will often turn, and you will mark it as one to which you will refer many events and from which you will date the beginning of a new career. In my own case I have chosen the date, nearly thirty years ago, as a starting-point, and I asked myself the question, To what extent has the medical art developed during that period? We all know that science in general—and, in particular, the sciences of anatomy, physiology and pathology, on which surgery and medicine are based—has made astonishing progress, and that an army of workers is now daily employed in these fields of research. By the application of better methods the rate at which knowledge is accumulating is accelerating every year, although it must be admitted that during the last two or three years there have been few discoveries of far-reaching importance. The question, however, of the advancement of the more practical side of medicine is the one which has occupied my attention in reviewing the years of my professional life, and although for many years I have not been engaged in the practical duties of my profession, I have always maintained that interest in its progress which the teacher of physiology in a large medical school ought to cultivate if he wishes to be in thorough sympathy with his pupils. It is a question that demands consideration and I cannot conceive of one more likely to interest you at the outset of your professional career." In the general purview of his important subject, Professor McKendrick, first referred to the questions of hospital construction and the improvements in the art of nursing, and referred to the important influence which the disasters of the Crimean war and Miss Nightingale's services had in these directions.

He then referred to the triumphs of sanitation and remarked: "Contrast, for example, the mortality in several of our Scotch towns from zymotic diseases in 1860 and 1888. In 1860 the deaths due to such diseases were 22·14 per cent. of the specified causes of death, whilst in 1888 the percentage was only 11·32." As a development of preventive medicine he paid a warm tribute to the inestimable services to suffering humanity of the antiseptic methods of Lister, based on the scientific labours of Pasteur; he noted that Glasgow had had the honour of being the theatre in which they were introduced to the notice of the scientific world.

In dealing next with advances in practical medicine Professor McKendrick referred to the difficulties of securing trustworthy data for sound conclusions and remarked: "I now come to a more difficult part of our investigation—namely, that relating to advances in practical medicine, and I may first of all say that, wide as medical literature is, it is next to impossible to obtain statistical evidence as to the curability of many medical diseases. It is not sufficient, of course, to point to a steadily diminishing death-rate, because that may be attributable to other causes than improvement in medical practice. Statistics on a large scale are still wanting, for two reasons: First, it is only in comparatively recent years that our great hospitals have carefully registered all their cases is such a form as to be readily accessible; and, in the second place, there is no registration of ordinary cases of disease (excluding certain zymotics) in private practice, unless the patient dies. We have therefore few trustworthy data to go upon. In passing, let me say that it would be a great gain if there were a national method of registering all serious cases of illness. Until we have some such system of registration it will be impossible to draw accurate conclusions as to the prevalence of many common but serious diseases, and as to the proportion of recoveries to deaths. When we examine hospital statistics it is sometimes difficult to form an opinion as to the ratio of deaths to recoveries, because it is the usual practice to enter the results under three heads—namely, relieved, cured and died, and the presumption is that many of those discharged as relieved ultimately die of the diseases in their own homes." From a comparison, however, of figures obtained from the Glasgow Infirmary and St. Bartholomew's Hospital he was interested to find that the results tallied very remarkably and that the balance as to successful advance was, on the whole, on the right side. Taking, however, a wider view of the subject and investigating the reports of the Registrar-General and after referring in terms of praise to Dr. Longstaff's "Studies in Statistics," he remarked: "In the first place, I selected the more common diseases, ascertained the number of deaths from each disease in 1864 and 1887 (a period of twenty-three years) and, taking the population of the country as the basis, calculated the proportion of deaths to 1,000,000 of living persons. These figures I give in a table, with which I need not trouble you, but the general result is this: There is a rise in the mortality from cancer inflammation of the brain, insanity, chorea, diseases of the heart, bronchitis, pleurisy, diabetes and kidney diseases; whilst there is a fall in the mortality from zymotics, diarrhœa, tabes, phthisis, apoplexy, paralysis, epilepsy, convulsions in children, pneumonia, female diseases, childbirth and accidents. There are several remarkable facts brought under our notice when we study these results. First, the increased mortality from lung diseases; second, the great fall in the mortality from phthisis. The latter disease has declined in death-rate for males to the extent of 14 per cent. and for females to 22 per cent. and the fall in mortality has been greatest between the ages of fifteen and thirty-five—that is to say, lives have been saved at a period of life when they were most valuable to the community. There has thus been a saving of life from this fell disease in one year of 3966 males and 6806 females, or a total of 10,772. We now know that phthisis is a disease associated with the tubercle bacillus and we can attack it in a very direct fashion. There can be no doubt that the saving of life is largely due to preventive medicine, but it is affected by curative medicine as well and I believe it will be more so in the future. Here medicine has achieved a triumph worthy of being compared with the triumphs of surgery, but much yet remains to be done. We

must study more carefully those peculiarities of human tissues that make them favourable for the development of the bacillus; we must learn how to alter, by inoculative or other procedures, the quality of those tissues and, finally, we must adopt measures for destroying the bacillus after it has found a lodgment in vital organs."

He then referred to the greatly decreased mortality from fevers and attributed this gratifying result not only to the labours of sanitarians but to the skill of the physician and in the course of his remarks regarded the result as due in a measure to the more careful administration of stimulants in such cases. He then added: "The investigation I have placed before you brings out another remarkable result which may be pondered over by those who think that improvements in the art of medicine will necessarily prolong the duration of human life far beyond the time allotted him by the Psalmist. We see that lives are being saved from fever, phthisis, scarlet fever and diarrhœal diseases; but, on the other hand, they are being lost at an increasing rate from pulmonary, cardiac, and renal diseases and from cancer. Putting it broadly, we are saving young and valuable lives, but we are losing older and less valuable ones. Now, if the diminution in the mortality from the diseases that destroy young lives continues, it will reach zero, and no more can be saved; but, on the other hand, if the increase in the mortality from the diseases that destroy older lives increases, there is no saying where it may end, and the result is that human life, instead of being prolonged, as one would naturally expect, will by-and-by diminish in duration. We will then reach the condition of society when more people will survive the perils of early years, whilst fewer will reach advanced old age. It is a satisfaction, however, that in this state of things the amount of life useful to the community will not suffer diminution, because lives will be saved whilst they are more valuable, not only to the State, but to their more immediate relatives. Then the spectacle of a young man cut down at the outset of his career will be a rare event, and not a sadly common occurence as it is in our experience. We are far from having reached this point of social evolution, but a study of vital statistics in present conditions appears to indicate that it is inevitable, or at all events very likely to occur.

Let me remark in passing that one of the most overwhelming facts that comes to light in the study of vital statistics is the rate at which the population of the world is increasing. For example, England and Wales alone add to the population of the world every day about 1000 persons—that is to say, there is this surplusage of births over deaths. One thousand little mortals march to the front every day, so that at the end of a year there is an army of 365,000 clamouring for food and who by-and-by will clamour for work. This is the growth of the national strength. Considerably over half a million human beings pass into eternity every year from England and Wales alone, but their places are taken by the next generation, and the next generation is steadily increasing in numbers. This afflux and efflux of human life, by the inevitable laws of birth and death, is a great and impressive phenomenon, calculated to awaken many reflections." Towards the close of his eloquent address he spoke of the opportunities which even the busy practitioner had for aiding in the advance of science, and referred in warm terms amongst others to the late Dr. James Ross of Manchester, whose work in the study of diseases of the nervous system is so well known."

There was much justice also in Professor McKendrick's remarks with reference to the attitude of the public towards the profession of medicine. "It is quite true," he said, "there is ample recognition of the large philanthropy of the medical profession and of the self-denying and sometimes heroic labours of medical men, but occasionally there is a want of appreciation of our efforts as regards the scientific aspect of medicine, whilst even educated men show a hankering after what they call curing disease. There is still in the public mind a belief that disease is an entity, something that must be driven out of the body or conquered by a specific remedy. The layman has a difficulty in grasping the scientific conception that disease is not a thing but a perverted process, a process that must be guided back to normal lines by judicious methods founded on a sound knowledge of its natural tendencies. There is also a sentimental disposition to put barriers in our way. Men do not yet see that each department of medical science (like all departments of science) must be allowed to pursue its own path and to acquire facts by its own methods, irrespective of practical results. Hence the impatience and the tendency to check the free play of scientific inquiry. Bacon, in the 'Advancement of Learning,' admirably sums up the whole matter and his words are as true in our day as they were in his:—'Almost all other arts and sciences are judged by acts or masterpieces and not by the successes and events. The lawyer is judged by the virtue of his pleading and not by the issue of the cause. The master of the ship is judged by directing his course aright and not by the fortune of the voyage. But the physician, and perhaps the politician, hath no particular acts demonstrative of his ability, but is judged most by the event, which is ever but as it is taken; for who can tell, if a patient die or recover, or if a state be preserved or ruined, whether it be art or accident? And, therefore, many times the impostor is prized and the man of virtue taxed. Nay, we see the weakness and credulity of man is such, as they will often prefer a mountebank or witch before a learned physician.'"

HOUSING OF THE LONDON POPULATION.

THE information recently published in the second volume of the "Detailed Report on the Census of 1891 in England and Wales," relating to the separate occupiers of tenements of less than five rooms, affords better means than previously existed for testing and comparing the true density of population in urban districts. Dr. Farr pointed out more than fifty years ago the constant relation between density of population and the rate of mortality; until now, however, there existed in this country practically no method of measuring density, except its proportion to area, which is obviously an uncertain and more or less unsatisfactory test of true density. But there can be no doubt that the tenement statistics recently published in the Census report, if properly used, will supply a far more reliable test of density and also a means for determining the amount of deleterious overcrowding that existed at the date of the Census in the various sanitary districts of England and Wales. It is naturally in the largest towns that this subject assumes the most importance; and a few figures bearing upon the housing of the London population are well worthy of consideration. We recently pointed out that of the separate tenements (consisting of entire houses or parts of houses) in England and Wales 52·3 per cent. included less than five rooms, comprising 4·7 per cent. of single rooms, 11·4 per cent. of two rooms, 12·3 per cent. of three rooms, and 23·9 per cent. of four rooms. In London the proportion of tenements of less than five rooms was 67·3 per cent., against 52·3 per cent. in England and Wales, a fact which need cause no surprise when the high house-rents that prevail in the metropolis are borne in mind. A far more striking contrast is, however, presented by comparing the proportion of single-room tenements. The average proportion of these in England and Wales was 4·7 per cent., whilst in London the proportion was very nearly four times as high—namely, 18·4 per cent. It is somewhat startling to find that nearly a sixth of the families (for the separate occupiers who filled up householders' schedules on Census Day may be taken to represent families) enumerated in London in April, 1891, are still residing in single rooms. A considerable proportion of these families living in single rooms did, in fact, consist of single individuals, and a further proportion consisted of but 2 persons, but the Census tables show that no fewer than 27,616 of these tenements had four or more inmates on the Census night and that more than 1200 had upwards of 7 inmates apiece. If we examine these London figures in greater detail we find very wide differences between the returns for various parts of the metropolis. The Registrar-General divides London for statistical purposes into five groups of registration districts, which are called the West, North, Central, East and South groups of districts. In these groups the proportion of tenements of more than five rooms ranged upwards from 19·8 in the Central to 20·2 in the East, 33·0 in the North, 36·6 in the West and 38·7 in the South groups. The single-room tenements, on the other

hand, which did not exceed 13·4 per cent. in the South districts, were 17·6 in the West districts, 20·0 in the North, 23·0 in the East and 30·6 per cent. in the Central districts. It is, therefore, abundantly clear that the Central districts contain the worst-housed population in the metropolis, and it should be noted that they consist of St. Giles, Strand, Holborn (including Clerkenwell and St. Luke) and the City registration districts. If we turn to the Registrar-General's Annual Summary for 1892 we find that the death-rates in that year in these groups of districts bore an evident relation to the proportion of families living in single-room tenements; for instance, the three groups of districts with the smallest proportions of single-room tenements had death-rates in 1891 only slightly exceeding 19 per 1000, whereas in the East districts, with 23·0 per cent. of single-room tenements, the death-rate was 23·6, and in the Central districts, where the proportion of these tenements was 30·6, the death-rate rose to 25·1 per 1000. It is evident, however, that these statistics require still more careful analysis, as the Census figures show that deleterious overcrowding is by no means confined to single-room tenements, for there appear to be in London more than 5000 two-room tenements which had had an average of more than four inmates per room on the Census night. The tables given in the Census report afford the means for showing clearly in which sanitary districts of London this unhealthy overcrowding is most conspicuous. It is only possible now to point out that more than 30 per cent. of the resident families were enumerated at the Census in 1891 in single-room tenements in the following metropolitan sanitary areas: St. George Southwark, 30·1; Clerkenwell, 30·4; Strand, 30·9; Whitechapel, 32·1; Holborn, 32·2; St. Marylebone, 32·3; St. Saviour Southwark, 33·2; St. Giles, 33·6; St. Luke, 35·9; and the highest proportion, 37·2 per cent., in St. George-in-the-East. These facts concerning the housing of the population in these ten metropolitan sanitary areas cannot fail to have an important bearing upon their death rates and impose heavy responsibilities upon the local sanitary authorities. Such unhealthy conditions can only be, even partly, controlled by constant and energetic house-to-house sanitary supervision.

REPORT OF THE ARMY MEDICAL DEPARTMENT FOR 1891.

II.

IT cannot be said that official blue-books and reports for the House of Commons are of the nature of light literature for leisure hours. With the thermometer at 90° F. giving rise to a feeling that the nerve centres have lost their inhibitory power over the peripheral nerve terminations of the skin and that the vital energies are being dissipated in streams of moist vapour, as if the body were being subjected to superheated steam, lassitude is the dominating sensation. It requires an effort of moral fortitude under such circumstances to encounter the dry and condensed facts embodied in a voluminous report of 400 pages of closely printed matter, and of moral courage to surmount a *cheval de frise* of figures and statistics. We think it is a great pity that the scope and more varied character of these reports as they originally appeared for some years was not maintained. They once contained a number of papers by medical officers of a professional kind as well as reports of a medico-topographical nature which were both interesting and instructive and afforded much valuable information, but economical Governments have eliminated this attractive feature from the volume.

We directed attention last week to the report of the Army Medical Department for 1891 and succinctly summarised the results of the health of the army as a whole during that year. We now propose to examine and analyse the facts and figures somewhat more in detail. To begin with the health of the troops serving in the United Kingdom, we find that the average strength of warrant officers, non-commissioned officers and men during 1891 was, according to the annual returns furnished by medical officers, 99,308, exclusive of men detached from their corps. The following table shows the ratios per 1000 of strength for that year:—

1891.	Ratios per 1000 of strength.				Average sick-time to each soldier.	Average duration of each case of sickness.
	Admissions.	Deaths.	Invalided.	Constantly sick.		
					Days.	Days.
England and Wales ..	801·0	5·07	15·56	43·77	15·97	19·94
Scotland	662·7	4·28	10·59	26·61	9·71	14·66
Ireland	708·0	4·68	12·22	38·03	13·88	19·60
United Kingdom .	772·2	4·94	14·51	41·66	15·20	19·69

Taking the United Kingdom as a whole, the ratio of admissions has declined by 38·4 per 1000 as compared with the corresponding rate for the preceding year; the death ratio is lower by 0·59 and the constantly-sick rate by 2·63. Compared with similar average ratios for the preceding ten years the decrease in admission-rate is as much as 48·7 per 1000, that in the death-rate 1·03, and that in the ratio of constant inefficiency through sickness 4·36 per 1000; and, compared with the corresponding average decennial periods, the average sick-time to each soldier has decreased by 1·59 days and the average duration of each case of sickness by 0·77 of a day.

The total loss by death and discharge by invaliding on account of medical unfitness during 1891 was 1965 men, equal to a ratio of 19·45 per 1000 of strength, which is less than the corresponding rate in the previous year by 2·80. The number of admissions under the head of eruptive fevers in the United Kingdom was 733 and there were 3 deaths. Only one case of small-pox was recorded during the year; it occurred at Hamilton in Scotland, in the person of a recruit, and in the preceding year there was no case. Scarlet fever seems to have been pretty widely distributed. The disease occurred at twenty-eight stations and of the total number of cases 121, or considerably more than half, took place at Aldershot, one of which was fatal. The admissions for this disease numbered altogether 215, with 3 deaths. Measles also prevailed, but to a very slight extent, and there was no death. As regards enteric fever there were 109 admissions and 17 deaths, the corresponding numbers in the previous year having been 126 and 30 respectively. The ratio of admissions was 1·1 per 1000, lower than the corresponding ratio in the preceding year by 0·2 and below the average rate of the previous ten years by 0·3. The percentage of mortality to attack was 15·6, that in the previous year having been 23·9 and the average of ten years 23·4. In England and Wales the percentage of mortality to attack was 14·3 and in Ireland it was 18·2 as compared with 23·5 in the previous year. Every district was affected to some extent, though in one or two there was only a single case. As in previous years, the station at which there were most cases of enteric fever was Dublin, 30 cases with 2 deaths being returned; these numbers do not differ much from those of the preceding year. There is much less prevalence of the disease, however, than there was in 1888 and 1889, when more than half the cases occurred in the Royal Barracks, which were then closed and have since undergone most extensive alterations in almost every respect. It is a noteworthy fact that nearly all, if not all, the barracks in Dublin appear to have supplied cases of this fever.

Influenza, which had been epidemic throughout the kingdom during the first half of 1890, again became prevalent in an epidemic form in 1891, though not to so great an extent. The disease was first observed amongst the troops in April, gradually increased for two months and declined throughout July.

The sickness from all forms of venereal disease taken together was large, but the total ratio of admissions was 197·4 per 1000, which is below the corresponding ratio in the previous year by 15·0 and is lower than the average ratio for the preceding five years by 35·9. The total ratio of constant inefficiency on account of these diseases was 15·34 per 1000,

being lower than the quinquennial average rate by 2·77. Passing over the other diseases and causes of death, which do not present any noticeable features, we may remark that there were 25 cases of suicide amongst the troops serving in the United Kingdom in 1891 as compared with 21 in the preceding year and with 20 the average number for the preceding ten years. Amongst the causes of invaliding the following are especially noticeable: the most frequent causes, as in previous years, were diseases of the circulatory system, equal to a ratio of 3·19 per 1000. Diseases of the nervous system were next in frequency. The tables setting forth the ratios of invaliding amongst men in their first year of service as compared with corresponding ratios amongst men invalided during all periods of service are interesting. The invaliding ratio amongst men in their first year of service from cardiac and nervous diseases is in excess of that amongst men at all other periods of service, but in tuberculous disease the condition is reversed, the ratio of men in their first year being somewhat less. The following table shows the relative ages of the army and the influence of age on sickness, mortality and invaliding amongst the troops serving in the United Kingdom during 1891:—

Ages.	Average strength.	Admissions.	Deaths.	Invalided.	Ratios per 1000 of Strength.		
					Admissions.	Deaths.	Invalided.
Under 20 years....	31,240	27,123	98	351	868·2	3·07	11·23
From 20 to 24 years	34,773	36,157	153	653	1039·8	4·40	18·78
„ 25 „ 29 „	18,844	9,682	102	263	513·8	5·41	13·96
„ 30 „ 34 „	7,682	2,186	61	78	284·6	7·94	10·15
„ 35 „ 39 „	4,426	1,030	50	71	232·7	11·30	16·04
40 years and upwards.....	2,343	515	37	50	219·8	15·79	21·34
Total	99,308	76,693	499	1,466	772·2	4·94	14·51

RAILWAY ACCIDENTS IN 1892.

THE return of railway accidents during the past year, which is issued from the Board of Trade, deals with more than one memorable disaster; indeed, the calamitous accidents which occurred at Hampstead Heath and at Thirsk during the period reviewed would alone suffice to give to it a marked, if not an exceptional, character. It is therefore very satisfactory to find that, even when the record of railway accidents is aggravated by such instances as these, the whole result is nevertheless such as to exhibit a slow but steady advance in the perfection of the system of working. This improvement is displayed even by the statistics—the roughest possible test—which show, as compared with the preceding year, a slight diminution in the number of fatal accidents and a marked reduction in that of the non-fatal casualties; but it is by the investigation of causes that the real nature of the improvement effected has to be ascertained. Conspicuous in the reports which have been submitted by the Board of Trade inspectors in earlier years have been defective working plant and, in particular, inadequate brake power, as well as incapacity on the part of the railway servants charged with the duty of conducting the traffic induced by overwork. In the present return, however, both these sources of danger are conspicuously absent. Fault is indeed found with the plant in more instances than one, but not with the brake mechanism. In one case a brake failed and by its failure gave rise to an accident, but that was a case in which it had suffered accidental damage, the mechanism itself being of the most approved design and the apparatus, until injured, very highly efficient. Indeed, such is the efficiency of the modern brake that the Board of Trade inspectors are now complaining that engine drivers rely upon it too confidently, and as a consequence run into terminal stations, for instance, at a dangerously high speed, under which circumstances a slight defect in the condition of the line, which may be "greasy," or a little propulsion by an uncalculated wind, or a moment's delay in applying the brake might give rise to a serious collision with the buffer stops. Another instance of such over-confidence occurs in connexion with the interlocking of signals, which has now been brought to such perfection that the signalman in most circumstances cannot make a dangerous error. Yet it is not well for him to rely entirely on his mechanism and to discharge from his mind the feeling of responsibility, or he may inadvertently disconcert the mechanical system and then any conceivable accident might happen.

From our point of view the most satisfactory feature perhaps of the present return is the evidence which it affords that the various companies have at length taken seriously in hand the remedy of the evil of excessive hours of labour of railway *employés*. In two instances attention is called to cases of unduly protracted labour; but there is no reason for supposing that in either case the man affected had been incapacitated thereby, nor is the accident itself attributed by the inspector to his negligence or incompetency. The case of the signalman at Thirsk was, as our readers may remember, an instance of forgetfulness occasioned by worry and overwork, but these resulted from the unfortunate man's domestic cares, and the company could not be held to be responsible for them. We note with the liveliest satisfaction that, in the result of a long-maintained agitation in favour of shorter hours for this important class of public servants, there stands to be recorded such striking testimony as the present return affords—namely, that those responsible for the organising of railway work are at length fully alive to the importance of putting upon their *employés* no greater burden than may be borne without injury to their physical powers.

THE PONTYPRIDD RAILWAY ACCIDENT.

WE are indebted to Mr. Howard Davies, medical officer to the Pontypridd urban sanitary authority, for the following interesting account of the results of this deplorable calamity:—

"As you desire me to furnish you with an account of the injuries inflicted in the lamentable railway accident near this town on Saturday last, it will give me pleasure to impart the information you wish to obtain for the reason that I hope by so doing I shall be rendering this locality a public service—i.e., should it be possible for you through your able journal to draw the attention of the profession, and through them the wealthy classes of the country, to the necessity of having hospitals provided in all localities having large populations and where people are so liable to injuries, such as the district of Pontypridd undoubtedly is.

"The accident occurred at a point below the nearest station, about a mile and a quarter. For the whole of that distance there is a long, continuous and gentle curve with a slight downward gradient. The locality is well known to me. The farmhouse I had just left is about a quarter of a mile from the scene of the accident. I left this house at a quarter to five and was proceeding homewards in my gig when my attention was drawn to what was then thought to be a collision on the Taff Vale Railway. I forthwith hastened across the fields, there being no thoroughfare on that side of the River Taff, to the scene of the accident. I believe I must have been on the spot within a few minutes of the occurrence of the calamity, as, according to the time taken by the signalman in the adjacent box, the train passed down towards Cardiff at 4.45 P.M. The spot is about two miles from Pontypridd and ten from Cardiff. The bank over which the carriages fell is steep and about seventy feet from the rails upon which the train was travelling to the spot where the two carriages lay on the small field below overlying many killed and injured. Upon arrival the scene I witnessed is one I shall never forget. There were many injured persons, who had been thrown out of the carriages and had otherwise got free from the wreckage, lying upon the grass, the embankment and the railway side above. The injured persons were suffering from wounds of the face, head and hands and were being attended to by the other passengers of the train, and by gangers and other persons in the employ of the railway company. Many

were bleeding profusely from wounds, especially on the scalp. Every endeavour was made in the absence of appliances and dressings to alleviate the sufferings of the injured. There were many St. John Ambulance men present, mostly railway men, whose aid was invaluable. My attention was immediately drawn to the worst cases of those already rescued that demanded medical attention. I thought it to be my duty to see, if possible, all the injured for myself and give my attention to those cases I thought were most in need of it. There was a large crowd around two of the coaches at the foot of the slope, lying bottom uppermost, the one leaning upon the other. Underneath these were many of the passengers, some alive, others quite dead. For those of the living who were visible I could do nothing as I was unable to get at them, with the exception of a little boy with a nasty scalp wound, which was bleeding. Until these coaches were removed—an operation that required the greatest caution in execution, and which was effected by means of screw-jacks and other apparatus—I could do nothing. But as the coaches were not on the flat, but lying against the bottom of the bank it was dangerous to the living underneath the wreck to move one part of the fallen structure in order to give relief to those lying under another part. What was really required was something strong enough to lift the whole thing bodily off the ground and such appliances could not be got at the moment.

"Seeing that there were so many suffering from serious injuries and not knowing the number of persons injured and alive under the wreckage, I considered what was best to be done in order to shelter them—having rendered first aid as best I could in the absence of the necessary appliances in the shape of bandages, dressings, sutures, splints &c. On two previous occasions when accidents of a similar nature have occurred on this line near the town of Pontypridd, the injured were conveyed to the infirmary at the Pontypridd union workhouse. Unfortunately, at present that infirmary is undergoing considerable alteration and the wards for the sick afford only sufficient accommodation for the requirements of the workhouse inmates alone. Under the circumstances I thought it best that the injured should be conveyed by special train to the Cardiff Infirmary ten miles away. Accordingly a telegram was sent to provide if possible beds for from twenty to fifty persons. Shortly afterwards the special train arrived upon the scene of the accident, bringing with it three medical gentlemen, Dr. Edgar Jones, Cardiff; Dr. Garrod Thomas, Newport; and Dr. Cook, Cardiff. News had also been sent to Pontypridd, whence came most of the medical gentlemen practising there and their assistants, including Mr. Leckie and assistant (Mr. Bristowe), Dr. Jones, Dr. Hunter and assistant, Mr. Jenkins and Mr. Bowker, Dr. Lewis and Dr. Evans. Engineers from Cardiff also arrived by special train and assumed command in directing the difficult task of removing the fallen carriages from the injured and dead who where still lying underneath. The work was gradually and successfully accomplished. As the injured were rescued they were conveyed some little distance on to the grass which had been prepared for their reception by placing in convenient spots cushions from the broken carriages. There was now sufficient skilled assistance present and the wounded and injured were properly attended to. All the persons brought out from under the wreckage were suffering from shock and the effects of pressure upon the chest and neck and were mostly in a cyanosed state. I should have stated that the carriage lying undermost and upon the victims had its body or upper part crushed completely and the framework of the base, which was still attached to the wheels, was resting upon them. This will account for the appearances of the injured. Most of the dead were almost black in the face. The last of those rescued alive were allowed plenty of breathing space for they were much in need of it; at the same time their injuries were being attended to, which were mostly the result of heavy crushing. A few had fractured ribs, others had dislocations one severe case of crushing of the left foot subsequently necessitated amputation at the Cardiff Infirmary. Other injuries consisted of the fracture of the left forearm in a woman; three appeared to suffer mostly from injuries to the abdomen and the pelvis. There were many bad scalp wounds cleanly cut as if done by glass, and attended by free hæmorrhage. The sufferers were of various ages. As soon as the worst cases had revived sufficiently to be removed they were placed as comfortably as possible in goods vans upon cushions and conveyed by rail to the Cardiff Infirmary, where the surgical staff and nurses were in readiness to receive them. Up to the present time there have been thirteen deaths; eleven were killed upon the spot, including one man not in the train, but who was assisting in the rescue. One died at the infirmary, I think, on Sunday, and one woman has since died in the country about three miles from the accident. Considering the number of coaches (six) that fell over the bank, and these were all shattered to pieces and contained about 500 persons, I think the loss of life must be regarded as small. It is also remarkable that there was occasion for amputation in only one instance. I believe all the remaining cases will do well.

"I may be permitted to remark, in conclusion, that I consider it to be a disgrace to this populous district that there should be no hospital nearer than Cardiff. Pontypridd is practically the centre of the South Wales coal field. Within a twelve miles radius we have a population of 400,000 persons. The Pontypridd Union has a population of 160,000, and in the whole of this area there is no provision for sheltering the injured. Most of the workmen are engaged in the collieries, where the work is very hazardous. They constantly meet with serious accidents, yet there is no place for treating them other than in their own cottages. Steps are now being taken to erect a cottage hospital here, but there is provision for six beds only. There should be a spacious infirmary here adequate to meet the requirements of the district, the Rhondda valleys and other mining valleys that converge to Pontypridd. As I stated when I first began to write this hurried account, if this accident may be the means of opening people's eyes to the urgent need of establishing a good hospital here it will have done great service. We are fifty years behind the times in that respect, and the masses, and indeed the classes, require educating on this matter."

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

Report on an Outbreak of Enteric fever at Chester-le-Street — Dr. Maclean Wilson has presented to the Local Government Board a report of considerable interest on a sudden outbreak of enteric fever at the village of Chester-le-Street. Between October, 1892, and the middle of March, 1893, no less than forty-three families were attacked, with the result that 58 cases of enteric fever occurred. For the most part these cases were divided into two groups. The first group, which consisted of 17 cases, occurred between Nov. 14th, 1892, and Jan. 24th, 1893, and the second group, amounting to 38 cases, between Feb. 11th and March 19th. The possibility of the spread of the disease through the agency of personal infection, defective drainage and milk-supply was carefully considered and discarded, but when the water-supply came to be examined it was made manifest that of forty-three houses invaded no less than forty-one derived their water from a source which supplied 60 per cent. of the total population. Of the remaining two cases, one was accounted for in another way, and in the other there were grounds for doubting the diagnosis. The water company in question derives its water from the Stanley burn, about two miles above the village; and into this burn, above the intake of the water-supply, there passes, directly or indirectly, the sewage of about 3500 persons. In addition to this it transpired that there were small outbreaks of enteric fever in a cluster of houses situated about three miles above the intake. One of these outbreaks occurred early in October, and in the other the cases were notified from Jan. 2nd to Feb. 24th—i.e., at periods antecedent to the Chester-le-Street outbreak. The water-pipes at the intake are supposed to be protected against coarser pollution by means of two wire screens, but these would seem not to have been in proper working order at the time of Dr. Wilson's visit. The water is eventually subjected to a process of filtration through a filter bed. The filtering material is said to consist of four or five feet of gravel and fine sand with a layer of rubble stone beneath. The surface of the sand is scraped off at intervals varying from ten days to three weeks, according to the condition of the

water, and this process goes on until three and a half feet of sand have been removed. Some 150 cartloads of sand, taken from the bed of the River Wear at a point below where it has received the sewage of a large population, are then placed in the filter beds and the process of scraping is again commenced. So far as can be gathered from the report there is no evidence of the sand being washed before it is used for filtration, or of the first portion of the filtered water being passed a second time through the filter bed. In addition to a variation of three and a half feet in the depth of the filtering material, the reservoir seems to run considerable risk of becoming contaminated by a well manured garden which abuts immediately on one side of the filter bed. There can be but little doubt that the water of the burn above the intake was on two occasions prior to the outbreaks of enteric fever at Chester-le-Street specifically contaminated, and it appears clear that the filter beds of the water company did not afford efficient protection against the passing of specifically polluted water. Inquiries such as this compel us to ask the question, "What is efficient filtration?" We feel that this question, if it were put to the surveyors of the various sanitary authorities in England, would meet with very different answers. If the thickness of the filtering material, the rate of filtration &c. were inquired into a wide variation probably would be discovered, a variation which could not be satisfactorily explained by the difference in the character of the waters dealt with. It is difficult to see how proper standards can be arrived at, short of frequent analyses of the filtered and unfiltered water, together with a bacteriological examination of the number and, as far as possible, the nature of the micro-organisms present. Dr. Wilson's report will well repay perusal, and the facts there revealed should afford a useful lesson to many sanitary authorities.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 5579 births and 4136 deaths were registered during the week ending Aug. 12th. The annual rate of mortality in these towns, which had declined in the preceding four weeks from 25·1 to 21·9 per 1000, further fell last week to 20·9. In London the rate was 19·6 per 1000, whilst it averaged 21·8 in the thirty-two provincial towns. The lowest rates in these towns were 12·9 in Croydon, 15·0 in Huddersfield, 15·5 in Norwich, 16·1 in West Ham and 17·1 in Bristol; the highest rates were 27·8 in Sheffield, 28·2 in Salford, 29·7 in Wolverhampton, 29·9 in Blackburn and 34·1 in Preston. The 4136 deaths included 974 which were referred to the principal zymotic diseases, against 1257 and 1116 in the preceding two weeks; of these, 604 resulted from diarrhœa, 89 from measles, 82 from diphtheria, 76 from whooping-cough, 67 from "fever" (principally enteric), 47 from scarlet fever and 9 from small-pox. The lowest death-rates from these zymotic diseases were recorded in Huddersfield, Swansea, Bristol, Brighton and Birkenhead; the highest rates in Portsmouth, Salford, Preston, Wolverhampton, Sheffield and Blackburn. The greatest mortality from measles occurred in Croydon, Plymouth, Sheffield and Blackburn; from scarlet fever in Leicester; from whooping-cough in Norwich, Derby and Bradford; from "fever" in Wolverhampton, Salford, Preston and Portsmouth; and from diarrhœa in Sunderland, Hull, Salford, Preston, Blackburn, Sheffield and Wolverhampton. The 82 deaths from diphtheria included 63 in London, 3 in Croydon and 3 in Birmingham. Three fatal cases of small-pox were registered in Salford, 2 in London, 2 in West Ham, 1 in Manchester and 1 in Bradford, but not one in any other of the thirty-three large towns; 221 cases of this disease were under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, against 328 280 and 246 at the end of the preceding three weeks; 26 new cases were admitted during the week, against 38 and 40 in the preceding two weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2885, against 2968, 2965 and 2944 on the preceding three Saturdays; 318 new cases were admitted during the week, against 282 and 341 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 182 and 208 in the preceding two weeks, declined again last week to 201, but were 17 above the corrected average. The causes of 61, or 1·4 per cent., of the deaths in the thirty-three towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bristol, Nottingdam, Cardiff, Newcastle-on-Tyne, and in ten other smaller towns; the largest proportions of uncertified deaths were registered in Brighton, Huddersfield, Leeds and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·1 and 19·4 per 1000 in the preceding two weeks, further rose to 19·7 during the week ending Aug. 12th, but was 1·2 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 14·9 in Aberdeen and 15·4 in Leith, to 22·8 in Dundee and 26·3 in Paisley. The 554 deaths in these towns included 40 which were referred to diarrhœa, 32 to whooping-cough, 13 to measles, 10 to "fever," 10 to scarlet fever, 9 to diphtheria, and not one to small-pox; in all, 114 deaths resulted from these principal zymotic diseases, against 110 and 80 in the preceding two weeks. These 114 deaths were equal to an annual rate of 4·0 per 1000, which was 0·9 below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of diarrhœa, which had declined from 59 to 23 in the preceding four weeks, rose again to 40 last week, of which 19 occurred in Glasgow and 6 in Edinburgh. The 32 deaths referred to whooping-cough showed a marked further increase upon those recorded in recent weeks, and included 13 in Glasgow, 7 in Edinburgh and 7 in Dundee. The 13 fatal cases of measles slightly exceeded the number in the preceding week; 9 occurred in Glasgow and 4 in Greenock. The deaths from scarlet fever, which had been 6 and 8 in the preceding two weeks, further rose to 10 last week, and included 8 in Glasgow. The 10 deaths referred to different forms of "fever," exceeded the number recorded in any recent week, and included 6 in Paisley and 2 in Leith. The fatal cases of diphtheria, which had been 5 in each of the preceding two weeks, rose to 10 last week, of which 6 occurred in Glasgow and 2 in Edinburgh. The deaths referred to diseases of the respiratory organs in these towns, which had been 78 and 80 in the preceding two weeks, were 81 last week, and exceeded by 7 the number in the corresponding week of last year. The causes of 40, or more than 7 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had declined from 30·3 to 28·9 per 1000 in the preceding three weeks, further fell to 26·1 during the week ending August 12th. During the first six weeks of the current quarter the death-rate in the city has averaged 27·7 per 1000, against 21·5 in London and 17·7 in Edinburgh. The 175 deaths registered in Dublin during the week under notice showed a decline of 19 from the number in the preceding week and included 41 which were referred to the principal zymotic diseases, against numbers declining from 45 to 41 in the preceding three weeks; of these, 30 resulted from diarrhœa, 5 from whooping-cough, 5 from "fever," 1 from measles, and not one either from small-pox, scarlet fever, or diphtheria. These 41 deaths were equal to an annual rate of 6·1 per 1000, the zymotic death-rate during the same period being 3·9 in London and 3·3 in Edinburgh. The fatal cases of diarrhœa, which had declined from 36 to 27 in the preceding three weeks, rose again to 30 last week. The deaths referred to different forms of "fever," which had been 1 and 2 in the preceding two weeks, further rose to 5 last week. The fatal cases of whooping-cough, which had been 4 in each of the preceding two weeks, were 5 last week. The 175 deaths registered in Dublin last week included 62 of infants under one year of age and 35 of persons aged upwards of sixty years; the deaths of infants showed a slight increase, whilst those of elderly persons were below those recorded in any recent week. Seven inquest cases and seven violent deaths were registered; and 50, or more than a fourth, of the deaths occurred in public institutions. The causes of 15, or nearly 9 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS IN THE MEDICAL STAFF.

BRIGADE-SURGEON FISHBOURNE, retired, has taken over Medical Charge at Sheffield from Deputy-Surgeon-General Giraud, who has resigned. Surgeon-Captain Saw has been posted to the North-Western District. The following officers have arrived at Aldershot for special duty during the manœuvres: Surgeon-Captain Reade, and Surgeon-Lieutenants Rivers and Reade. Surgeon-Captain Salmon has been granted sick leave from Egypt. The following officers have rejoined their several stations from leave of absence: Surgeon-Major Smith and Surgeon-Captain Tyrrell, Aldershot; Surgeon-Lieutenant-Colonel Blood, Southern District; Surgeon-Lieutenant Ryall, Woolwich; Surgeon-Major Greene, Dublin; and Surgeon-Colonel Cuffe, Belfast.

ARMY MEDICAL STAFF.

Surgeon-Major-General Charles Dodgson Madden is placed on retired pay.

INDIA AND THE INDIAN MEDICAL SERVICES.

The following appointments are announced:—Surgeon-Captain E. G. R. Whitcombe, 7th Bombay Infantry, Sambalpur, to officiate as Civil Surgeon, Sambalpur, in addition to his own duties, until further orders. Surgeon-Major J. Maitland, M.D., to act as Professor of Surgery and Clinical Surgery, Medical College, during the absence of Surgeon-Lieutenant-Colonel W. R. Browne, M.D., on leave. Surgeon-Captain J. W. Wolfe, I.M.S., to be Civil Surgeon of Meiktila. The undermentioned Surgeon-Lieutenants appointed to the Bengal Establishment have reported their arrival at Bombay: George Yeates Cobb Hunter and Bernard Robert Chatterton. The services of Surgeon-Captain H. M. Morris, I.M.S., are placed at the disposal of the Government of India. The services of Surgeon-Captain H. B. Melville, M.B., I.M.S. (Bengal), Civil Surgeon, North Lushai Hills, are placed temporarily at the disposal of the Government of the North-West Provinces and Oudh. The promotion of Surgeon-Colonel R. Bowman will have effect from Feb. 26th, 1893, the tenure of his appointment in the administrative grade of the Indian Medical Service, Bombay, reckoning from April 16th, 1893, inclusive.

NAVAL MEDICAL SERVICE.

Fleet-Surgeon William Frederick Spencer, M.D., has been placed on the Retired List of his rank at his own request. Staff-Surgeon Stewart Fraser Hamilton has been promoted to the rank of Fleet-Surgeon in Her Majesty's Fleet. Appointments: Staff-Surgeon Michael Ronan, B.A., has been appointed to the *Swiftsure* and Reginald T. A. Levinge Surgeon to the *Urgent*.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Major Peter B. Giles to be Surgeon-Lieutenant-Colonel; Surgeon-Captain Ernest Wykeham Barnes, 6th Volunteer Battalion, the King's (Liverpool Regiment), to be Surgeon-Captain.

VOLUNTEER CORPS.

Artillery: 1st Essex (Eastern Division Royal Artillery): Sidney Herbert Snell, M.D., to be Surgeon-Lieutenant.—1st West Riding of Yorkshire (Western Division, Royal Artillery): J. Nightingale, M.B., to be Surgeon-Lieutenant.—1st Volunteer Battalion, the South Staffordshire Regiment: Surgeon-Lieutenant C. T. Griffiths to be Surgeon-Captain.—2nd London: Sydney Monckton Copeman, M.D., to be Surgeon-Lieutenant.—3rd Volunteer Battalion, the Manchester Regiment: John William Talent, M.B., to be Surgeon-Lieutenant.

THE VOLUNTEER OFFICERS' DECORATION.

This decoration has been conferred upon the following Officers:—*Eastern District: Light Horse* (late 1st Huntingdonshire): Surgeon and Honorary Surgeon-Major Dennis Adams, retired.—*Western District: Royal Engineers:* 2nd Gloucestershire (The Bristol): Surgeon-Major James Knill. *Rifle:* 2nd Volunteer Battalion, the Prince Albert's (Somersetshire Light Infantry): Surgeon-Major W. L. Winterbotham, M.B., retired.—*Scottish District: Rifle:* Galloway: Surgeon-Major William Johnstone. 1st Volunteer Battalion, the Gordon Highlanders: Surgeon-Major Patrick Blaikie Smith, M.D.

We have to announce with regret the death of Surgeon-Major Peter Henry Roe, which occurred at Upper Norwood on the 6th inst. He obtained the L.R.C.S. Irel. in 1847 and was appointed Assistant Staff-Surgeon on the Gold Coast in the same year, Surgeon to the Gold Coast Artillery in 1853 and was afterwards Staff-Surgeon and Principal Medical Officer on the West Coast of Africa. He became Surgeon-Major in 1858 and retired in 1859.

THE VOLUNTEER MEDICAL STAFF CORPS.

This corps was encamped at the Royal Victoria Hospital, Netley, during the past week for annual training with the Medical Staff Corps. By permission of the War Office, the men of the Volunteer Medical Staff who took part in the training were: seventy-five from Manchester, fifty from Norfolk and seventy-five from Kent companies. The men were trained in the details of field work and in the erection and working of field kitchens, as well as in practical work in the hospital wards under the medical officers.

THE HEAT AND MILITARY WORK.

We have adverted elsewhere to the excessive heat of this summer which, so far as August is concerned, has shown the longest period with the daily maxima above 80° F. during the last half century. The effect on the troops at Aldershot, Plymouth, Lydd Camp and other places has been very observable and has been made the subject of notice in various journals. The infantry battalions at Aldershot have executed their route marches under trying circumstances; numbers fell out and the ambulance vehicles were fully occupied. At Lydd a number of soldiers were also prostrated by the heat and the parades were considerately shortened.

RECRUITING.

There has been a very serious falling off in the recruiting during the present year and if it does not proceed at a more active rate than it promises at the present time the army will be much below its authorised strength at the end of the year—especially in the Infantry of the Line. According to *The Times* the subject is engaging the serious attention of the service members in the House of Commons, who will press Mr. Campbell-Bannerman, the War Minister, as to the intentions of the Government in the matter. This country has a very large force to maintain abroad—in India and the colonies, and recruits must consequently be obtained. It would never do to lower the present standard, and it seems clear that some of the recommendations—at any rate of Lord Wantage's Committee—must be adopted, as we pointed out at the time. To begin with, it is a question of supply and demand, and the pay of the British soldier is not sufficient to tempt young men to adopt the army as a career when put in competition with other employments. The infantry soldier wants a shilling a day clear of all stoppages, and there are other directions and details connected with the soldier's life and occupation which, notwithstanding that they are of a minor character, require to be carefully considered with a view to seeing whether the army cannot be made more popular than it is at the present time. The British soldier, take him all in all, is a really fine fellow, who encounters risks and discomforts of various kinds and deserves well of his country.

THE LATE GENERAL SIR EDWARD HAMLEY.

The late General Sir E. Hamley was interred at Brompton Cemetery on the 16th inst., close to the tomb of Vice-Admiral Hamley, who was buried there more than a century ago. Sir Edward Hamley was a distinguished man, endowed with great intellectual capacity, versatility and force of character, and officers of the Army Medical Service will not forget that he never joined in the unjust and ungenerous criticism to which they were subjected at the close of a campaign in which he took a prominent part. In addition to having written the best book on strategy and "The Operations of War," and other military and historical works, he was a novelist, essayist and reviewer of no mean order, a vigorous and independent thinker and a charming writer. "If a patient complains of palpitation it is very often his stomach and not his heart that is at fault; if he complains of breathlessness, examine his heart," is frequently said, and so it was with the late general. The earlier symptom of the cardiac disease of which this fine officer and soldier died was a complaint of breathlessness.

WINDSOR BARRACKS.

Surgeon-Colonel Hamilton, the principal medical officer of the Home District, is to make a sanitary inspection of the

drainage of the barracks at Windsor accompanied by an officer of the Royal Engineers. The drainage of the barracks is said to be in an unsatisfactory state.

MILITIA MEDICAL STAFF CORPS.

Owing to a printer's error the word "Corps" was omitted in the above heading of the Services in our last issue.

Correspondence.

"Audi alteram partem."

"THE BRITISH MEDICAL ASSOCIATION AT NEWCASTLE-ON-TYNE."

To the Editors of THE LANCET.

SIRS,—I read with especial interest your remarks on the annual meeting of the British Medical Association. Only a few weeks since I pointed out in the Journal how little encouragement was given to general practitioners to take part in the subjects brought forward. The annual meeting of the Association should, in my humble opinion, be the Parliament of the profession at large. At present too much is attempted to be done and what is done is not of special interest to the bulk of the medical men. Specialists might well content themselves with the opportunities they have of bringing their views before the various London medical and surgical societies. The Council should arrange for the discussion of subjects which would be likely to interest general practitioners, and encouragement should be given to the practitioners to express their views and opinions thereon. It may be a difficult matter to arrange that the annual meeting should be held either earlier or later in the summer; but there is no doubt that the beginning of August, from a climatic point of view, is not the most suitable time for a scientific congress to meet. Either June or September would be better months; probably most men would if asked choose September. The temperature then would be more conducive to scientific work and the majority of men would have been renovated by their autumnal holiday. More time is absolutely necessary, also, as you remark, for the "grievances and just complaints of the members." The Council is naturally the Cabinet of our Parliament and it should not be a difficult matter to allow members to bring forward questions of importance at short notice. If it is found that the time allotted for the meeting is too short why should it not be extended for two or three days? Is not too much time consumed in relaxation? What with garden parties, receptions, conversaziones and other forms of pleasure there is but little time left for the ordinary routine business. If we met in September we should be more inclined to settle down to earnest work, and would not shun the sectional meetings so much as is the case now.

I am, Sirs, yours faithfully,

Cardiff, Aug. 14th, 1893. T. GARRETT HORDER.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Aug. 12th, under the report of the section of Obstetric Medicine and Gynæcology, it is stated that "application was made to the secretary of the Section for the opportunity of making some extracts from Professor Pozzi's valuable paper, which was not accorded." In fairness allow me to state that a gentleman certainly did ask me for Professor Pozzi's paper, which he offered to return; but he did not, to the best of my belief, mention by whom he was authorised to make the request or explain who he was. I explained to him that Professor Pozzi had asked me as a personal favour not to part with the rough MS. until it had been revised. This it was quite impossible to do within a few minutes of closing the Section for the day, which was the time when the request for the paper was made. I offered to let the gentleman see the paper if he would call again after I had overtaken the absolutely necessary secretarial work for the day and had had time to roughly revise Professor Pozzi's paper. He did not call again or communicate with me in any way respecting the paper.

Personally I should have been greatly pleased to have handed over the paper to any such excellent medium of publicity as THE LANCET. But I conceive that a secretary of a Section must in the first place be guided by the expressed wishes of the individual writers of papers; and, secondly, see that, so far as possible, the primary publication rights of the British Medical Association are protected. This is surely the more necessary when, as in the above instance, a paper has been written by a foreigner in English, and when it is inferentially desirable to harmonise the style with that of English medical writings. Showing that the recognised claims of THE LANCET were favourably considered and conserved, permit me to add that if you will have the goodness to examine the MS. of the speeches in the debates you will find that more than one is in the handwriting of

Aug. 12th, 1893. THE SECRETARY OF SECTION C.

*** We willingly insert the above letter. Our representative asked to be allowed to make the extracts on behalf of THE LANCET. A very brief time would have sufficed to make the extracts in shorthand. The language would have been revised before publication. Pressure of work forbade the loss of time which would have been entailed by repeating the application. We gladly acquit the Secretary of any intentional discourtesy.—ED. L.

THE TREATMENT OF INFANTILE DIARRHŒA.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Aug. 3rd I read with pleasure Dr. Wheaton's advocacy of strong antiseptics in the treatment of infantile diarrhœa. I am convinced of their efficacy. Last month, during a severe epidemic in this city, I used the glycerine of carbolic acid in drop doses every hour with signal advantage, and notably in one case in the Children's Hospital in which there was marked collapse. I can speak highly also of the hypodermic injection of morphia in these very severe cases in one-thirtieth of a grain doses and repeated in two hours if necessary, this treatment being especially useful when the vomiting is urgent and distressing, as it often is. Dr. Wheaton might have drawn attention to the importance of avoiding milk in these cases and of substituting raw meat juice. I find that the administration of milk is persevered in and I think there can be little doubt that it does much harm. Again, the application of warmth to the abdomen by means of a pad of wadding and a binder is an important adjunct, as had been pointed out by Dr. Eustace Smith.

I am, Sirs, yours faithfully,

Belfast, Aug. 12th, 1893. JOHN MCCAW, M.D. &c.

LOCAL GOVERNMENT IN SCOTCH DISTRICT LUNACY MATTERS.

To the Editors of THE LANCET.

SIRS,—I have before me the "Report of a Committee appointed by the County Council of Argyll to bring before the notice of Parliament the necessity of restricting the statutory powers of the General Board of Lunacy over the District Lunacy Boards." So much has been said of Local Government that after the passing of the Acts for England and Scotland I had thought that the local authorities had some little power over the expenditure of the moneys raised by them in their own districts, but a perusal of this report clearly shows the contrary. From the time of the erection of the Argyll Asylum the General Board of Lunacy seem to have forced the district board to carry out their views, and the district board in this report show that the views they unwillingly carried out were not only short-sighted but costly and that their own policy, which they were not permitted to adopt, was not only in accord with now recognised experience but, seen by the light of time, would not only have been best but cheapest. For instance, in 1861 the district board wished to erect an asylum for 200 patients, but were only allowed to build for 120, and before the end of three years the General Board called on them to increase the number of beds to the actual number they had wished to build for, and as they then united with Bute 50 additional beds for that county were added. An addition in so short a time involved increased expense and could not be so complete as if the original

building had been devised in all its parts for 200 instead of for 120 patients.

In 1882 a further addition to the asylum was necessary, and, though the plans were approved by the General Board of Lunacy, yet they caused changes to be made during the construction which involved an extra expenditure of over £4000, which, in the opinion of the district board, might have been avoided by the use of judicious foresight. In 1888 the General Board called on the district board to provide additional infirmary accommodation, but would not allow them to build a new separate infirmary as they proposed (and as is held on most modern medical and sanitary principles to be the best mode of providing such accommodation), but made them rearrange some old wards for infirmary purposes. They also caused them to send away their private patients, who yielded them an income of some £700 a year, though they had formerly praised the board for taking them and although the whole spirit of the age and of recent Lunacy enactments in England is to encourage the treatment of private patients in public asylums and thus gradually to get rid of the private asylum system.

The committee of the Argyll County Council who submit this careful and exhaustive report is composed of four influential and well-known members and they give a complete summary of statements of expenditure, with extracts from the reports of the Visiting Commissioners on all matters in dispute, as also the opinion of a counsel of eminence, lately a law officer of the Crown, on the powers of the General Board of Lunacy; they also include a report of the District Lunacy Board of Bute, which deals with the matter as it concerns them. Both the councils of Argyll and Bute think that immediate steps should be taken to obtain a Lunacy Amendment Act which should repeal that part of the existing statutes which confers such powers on the General Board of Lunacy. A meeting was held in Edinburgh on July 26th of representatives of different councils to consider the powers of district lunacy boards, and the following resolution was unanimously adopted: "That for the better administration of the Lunacy Acts in Scotland more ample powers should be conferred on district boards as regards the erection and maintenance of asylums and visitation and inspection thereof and financial arrangements, without restriction of the General Board in regard to the curative treatment of the insane."[1] Eleven Scotch county councils approve of the action and concur in the objects desired. At present in Scotland there is no appeal except to the General Board of Lunacy, and the Argyll Local Board state that they invariably accept the views of the Visiting Commissioners who are part of the board. In England, in counties and boroughs, there is a power of appeal on dispute as to buildings, sites &c., to the Home Secretary. The Royal asylums in Scotland are not subject to the control of the Commissioners in Lunacy either as regards expenditure or maintenance or buildings, and yet the Commissioners praise their management, and the enlightened views which guide their structural changes or new erections, in no measured terms. It might be greatly to the benefit of district lunacy administration in Scotland if what is sought for by these councils were granted.—I am, Sirs, yours faithfully,

Aug. 16th, 1893. OBSERVER.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Heat.

THIS city is experiencing the same remarkable and continued hot weather that appears to prevail elsewhere. People who can remember the early years of this century and may be considered amongst the oldest inhabitants say that they never remember such a fierce sun and such long-continued hot weather. Citizens, moreover, who have resided in tropical climates—and there are many of these in Liverpool—assert that the heat has been literally tropical. It is satisfactory to be able to report that so far no fatalities have resulted from sunstroke.

An Epidemic of Suicides.

Allusion was made in a previous letter to the terrible frequency of suicides in this city at the present time. They continue to occur almost daily, the motive apparently being the mental depression arising from embarrassed pecuniary circumstances. Two cases of pistol-shot wounds presented peculiar features. In the first a basket-maker, having been missed by his friends, was found in bed, fully dressed, with a small pistol tightly clenched in his right hand. The surgeon who examined the body found a circular opening in the hard palate; it was somewhat larger than the muzzle of the pistol produced at the inquest. On feeling the top of the head a fracture was felt beneath the scalp, the bullet probably lying between the dura mater and the skull. Rigor mortis was well established, and, as putrefaction was commencing, it was evident that the deceased had been dead for at least twenty-four hours, the weather being very hot. The extraordinary circumstance here was that the house was a small one with houses on each side which were occupied, and yet the report of the pistol had never been heard. In the second case this latter fact was even more extraordinary. The deceased, a clergyman, finding himself becoming blind, terminated his existence by shooting himself in the North-Western Hotel. The report of the pistol was not heard; the death was only discovered by a telegram arriving for the deceased gentleman and the failure of the porter to obtain a reply or admission.

Bathing Fatalities and Swimming.

The present season always brings more or less prominently into notice the many fatalities attendant on the healthy practice (*ceteris paribus*) of sea-bathing and the circumstance that most, if not all, of these fatalities might have been prevented had the unfortunate victims been capable of swimming. This summer has been no exception to the rule; on the contrary, the fatalities have been more numerous than previously, and in one which occurred near this city the pathetic nature of the fatality taught a lesson which it is to be hoped will produce permanent results. Three boys were seen to be overtaken by the tide and to be in danger of drowning; their danger was noticed by a large number of persons, including some members of the local coastguard. More than an hour passed, the tide rising rapidly and threatening to wash the three boys off their feet. Unfortunately there was a chapter of accidents. The punt belonging to the coastguard could not be unfastened; there was no rocket or life-saving apparatus; and the coastguardsmen could not swim. A schoolmaster, though not a good swimmer, went in the water, reached and saved one of the boys. He was out of his depth a very short distance and a good swimmer might have saved all three; but the most pathetic part of the story is that the elder of the two drowned boys was a swimmer and could have saved his own life, but would not desert his comrade, who was unable to swim, heroically holding him up until his strength failed and becoming a victim to his own humanity. Considering that the confidence required to keep afloat can be acquired in a very few lessons by the modern method of teaching and that a very little practice will make any boy a capable swimmer, the time has come when every boy of ten whose health is good ought to be able to swim. The rule at Eton and other public schools which forbids boys from becoming members of the boat club until they have shown that they are good swimmers is one which ought to be general. No boy should be allowed to indulge in the pastime of boating or skating until he has mastered the difficulties of learning to swim.

Aug. 16th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Water-supply of Manchester.

AFTER the long-continued drought and the consequent curtailment of the water-supply it is refreshing to find that the authorities have found themselves justified in restoring the constant supply to which Manchester has so long been accustomed. For many weeks past the water had been turned off from five in the evening to about the same hour next morning; but on Wednesday last, to the comfort and satisfaction of everyone, all restrictions on the supply of water were removed. It is confidently expected that the Woodhead water-supply will shortly be supplemented to the extent of about 10,000,000 gallons daily from Thirlmere. Mr. Hill, the engineer of these waterworks, stated at a meeting which was held in this neighbourhood last week

[1] Notice in Scotsman and Scottish Leader, July 27th, 1893.

that the whole length of the aqueduct—some ninety-six miles—was now completed and that of this length eighty miles had already been tested and had been found to be satisfactory. As the aqueduct has been constructed to convey to Manchester, not 10,000,000 gallons of water only, but 50,000,000 gallons daily, it is to be hoped that—at any rate, for many years to come—we shall not again hear of such a scarcity of water as that to which we have had to submit during the past summer.

Ancoats Hospital.

The annual meeting of this really valuable institution was held at the hospital on Friday last, under the presidency of Mr. Hetherington, who has for many years past taken a very warm interest in its success. For sixty-five years past this excellent charity, under the name of the Ardwick and Ancoats Dispensary, has been doing good service in one of the oldest and densest of the business parts of Manchester; but about ten years ago the trustees, feeling that a general hospital for the treatment of the large number of accidents that constantly occurred in Ancoats was much needed in the immediate neighbourhood of the dispensary, determined to erect the building which, under the name of the Ancoats Hospital, now adorns the site of the old institution in Mill-street. It appears that the full complement of beds contained in the several wards, 100 in number, are now fully occupied. This of course involves increased expenditure for the augmented nursing staff and for additional maintenance charges. Mr. James Jardine has munificently supplemented his frequent previous gifts by sending a cheque to the treasurer for £1000 and has thus enabled the committee to open the last of the wards—the Albert Victor Ward. The amount of work done by the hospital staff will be gathered from the statement that during last year 2301 house patients, 4580 out-patients and 1035 in-patients were attended by the medical staff; whilst 6185 accidents were treated at the hospital. The Convalescent Home for Women at Wilmslow is now found to be inadequate for the needs of a hospital with 100 beds, and similar accommodation for men is urgently required. £10,000 is the sum mentioned as being required to supply this necessary adjunct to the hospital, which is now doing splendid work. Surely it is not too much to hope that this sum will shortly be placed at the disposal of the committee.

Epidemic Diarrhœa.

The comparatively cooler weather of the last fortnight has been accompanied by a corresponding decrease in the mortality from diarrhœa, for the registered deaths from that disease and English cholera together, which in the week ending July 22nd had reached the high total of 101, fell to 40 in the week before last and 36 in the week ending Aug. 12th. The death-rate from diarrhœal diseases would appear to be in reality higher than this if all the deaths due to climatic conditions were returned as from diarrhœa; but it appears that many infantile deaths are returned as being from "gastro-enteritis," and therefore find their way into a special class of diseases not commonly associated with diarrhœa. Although the mean temperature of the air in the shaded screen has considerably fallen during the last two weeks, the four-foot earth thermometer steadily retains the high temperature of 59°, or 3° above the critical point.

Enteric Fever at Stockport.

Dr. Porter, the medical officer of health of Stockport, has recently presented to the corporation of that borough a voluminous report on a serious prevalence of typhoid fever which occurred there in the course of the present year. It appears from the report that, although isolated cases had been noticed in Stockport in previous weeks, the week ending June 25th was that in which the epidemic really commenced. In all, eighty-eight cases occurred, which was almost equally made up of males and females, the majority of the patients being from five to forty-five years of age. Judging from the number of cases reported, the Edgeley Ward would appear to have been most seriously affected; although, from the circumstance that no statement as to population is contained in this report, it is impossible to be certain whether or not the disease has really been more prevalent there in proportion to persons living than in other parts of the town. In his well-written report Dr. Porter discusses the several modes in which the disease may in the recent epidemic have been propagated. He gives several instances of privy and filth nuisances and of specific contamination of privy pits, drains and sewers, which might have caused a much more extensive epidemic than that which has recently occurred and which is now apparently at an end. In the course of his report Dr. Porter paints a remarkable picture of the sanitary neglect which appears to obtain generally in Stockport, and he gives temperate and valuable advice to his sanitary authority, which they will do well to act upon without delay; for, should they neglect to do so, it is only too likely that another and perhaps infinitely more serious prevalence of typhoid fever will take place before long.

Aug. 15th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Outbreak of Small-pox.

SEVERAL cases of small-pox have been removed from Mullinahone, a village in the Callan district of the county of Tipperary, to the Callan workhouse. The removal of the cases to the workhouse has caused no little excitement in the district, the inhabitants being in daily fear that the disease will spread amongst them. They communicated with the Local Government Board, who replied that isolation was not possible in Mullinahone and also said that the workhouse was the only place where such cases could be treated with safety to the public health. The Local Government Board have written to the medical officer of health in whose district the disease occurred asking for a detailed report as to how it originated.

Sir Patrick Dun's Hospital.

An urgent appeal has been issued on behalf of this hospital, the income of which from landed property in the county of Waterford has considerably diminished. The decrease is about £1000 yearly, and unless a substantial sum is collected before October next the number of beds in the hospital will have to be largely reduced.

Rathdrum Workhouse.

The half-yearly report of the inspector of the Local Government Board was laid before the Rathdrum guardians last week. The inspector reported that the arrangements for medical attendance and nursing in the sick wards were sufficient, except in the case of the lunatic departments, where paid attendants were much required. The workhouse hospital was very crowded during the winter months, and the inspector suggested that as the guardians were at present carrying out some improvements it would be well to consider the advisability of adding the present coal shed, which is under part of the male hospital, to the hospital, as in this way an additional ward would be provided.

Typhoid Fever in Dublin.

The prevalence of typhoid fever in Dublin has been ascribed to many causes, but all sanitarians are agreed that no considerable decrease in the disease can be expected until a proper system of drainage is provided. Some time ago a committee consisting of thirteen members, chiefly medical men, was formed in Dublin with the express object of investigating the causes of typhoid fever in Dublin, and on the 14th inst. a deputation waited on the corporation and submitted the following recommendations:—1. An efficient system of subsoil drainage should be carried out in Dublin together with the main sewerage about to be provided. 2. Efforts should be made to secure more complete returns of cases of typhoid fever in Dublin, under the Infectious Disease Notification Act, 1889, and all the suburban townships should put the Act in force. 3. A map or other suitable record should be prepared for each year by the sanitary authority in Dublin, indicating every house in which typhoid fever has occurred, and such a record should be available for inspection. 4. A constant check on the general condition of the Vartry or other water-supply should be maintained by daily analyses of samples being taken at two or three points in the city. The utmost cleanliness of any pipes or tubes laid down should be secured and means should be adopted to guard against the entrance of surface drainage through street fittings. 5. A systematic effort should be made to induce householders to guard against the use for drinking purposes of any water that is stored in cisterns in connexion with water-closets or which are open in any other way to sources of pollution. 6. Official registration and bi-monthly inspections, without notice, of dairy yards should be introduced. 7. There should be a compulsory closing of such

dairy yards as may be considered by the sanitary authorities to be a danger to the public health either on account of: (*a*) proximity to fever hospitals or to decomposing refuse, or by (*b*) continued infringement of the rules and by-laws. 8. All matters connected with house drainage should be under the direction of a single department of the sanitary authority, and inspection should be carried out by properly qualified officials. 9. Complaints from the landlord, the occupier or the tenant of a house should be attended to and reported on in writing within six days. 10. As plans of drains for all houses about to be built must be lodged with the sanitary authority under the Public Health By-laws, that authority should ensure that such plans as may be approved by them shall be carried out by examining the works and testing the drains before the houses are occupied. Inspections of new buildings, under the Public Health (Ireland) Act, 1878, or other Acts conferring sanitary powers on the municipal authority, should be exhaustively carried out. 11. It is desirable that compulsory inspection of houses and connecting drains should be instituted in the following cases: (*a*) on the occurrence in two consecutive years of cases of typhoid fever, diphtheria, cholera or epidemic diarrhœa in more than two houses in any street, square, or place served by the same section of street sewer; and (*b*) on change of occupancy of a house, of which notification to the sanitary authority should be compulsory on the landlord, and of which house there had been no sanitary inspection for at least twelve months. 12. A record should be kept of all inspections of drains, of the faults found, and how such faults were remedied. 13. The water test should always be applied to both house and connecting drains, and the connecting drains should be tested in every case in which the house drains are examined. 14. Every house should have ventilated drains, with properly ventilated intercepting traps between the main sewers and the house. The ventilators should be carried up the outside of the house. 15. The hopper barge for removal of refuse should be loaded lower down the river than is the case at present. 16. The recommendations of the Royal Commission of 1879–80, which have not yet been carried out, should be at once adopted. 17. The dispensary medical officers should be supplied with simple printed instructions as to disinfection of clothes and discharges, so that they may hand them to their patients. 18. The public should be frequently made acquainted with the facilities afforded for the gratuitous disinfection by the sanitary authorities of their houses, clothing and bedding. Mr. Furling, the President of the Dublin Sanitary Association, who introduced the deputation, said that they had come to the conclusion that the saturation of the soil of Dublin was, if not the principal cause, one of the chief factors in promoting the high death-rate from typhoid fever in Dublin. Therefore, they place first amongst their recommendations that an efficient system of subsoil drainage should be carried out in Dublin, together with the main drainage system to be provided. Other members addressed the meeting, and the Lord Mayor, in replying, said that he would suggest that their report should be sent to the Public Health Committee for their consideration; but with reference to the main drainage scheme, he pointed out that the sewers which would be adequate to carry the sewage to the point of outfall would be by no means adequate for the disposal of the subsoil water as well, but that it would require sewers so much in excess that the cost of the precipitation works for dealing with that would increase the cost of the scheme by more than double. The report has accordingly been referred to the Public Health Committee of the corporation.

Presentation to Mr. R. Henry.

On Saturday, Aug. 12th, at Dungannon, Mr. Henry of Pomeroy, in the county of Tyrone, on his recovery after a severe illess, was presented by his friends with a portrait of himself and a handsome service of silver, consisting of salver, kettle and stand, with teapot, sugar basin and cream ewers. On the salver, as well as on the frame of the picture, was the following inscription: "Presented to Dr. Robert Henry, F.R.C.S. Edin., by a number of his friends, 1893."

The Coroner's Court in Belfast.

On Monday the new coroner, Mr. E. S. Finnegan, at the opening of his court, said that through the kindness of the city council he had been granted the use of the Recorder's court to hold inquests when it was unoccupied by his Honour, Mr. Fitzgibbon. In the future he would hold all inquests there. What he proposed to do was to meet the jury at the place where the body was, "view" the body there and then to adjourn to his court to hold the inquiry. Further, to save the time of the jury, he would keep an accurate list and any person who acted as juror would not be called upon again for twelve months. He would also hold his court at hours convenient to the members of the jury.

Royal University of Ireland.

Next year there will be offered for competition three junior fellowships, tenable for four years and of a yearly value of £200 each. Candidates to compete for these fellowships must be graduates in arts of the University of not less than two years' standing. The fee has been fixed at £3, and the subjects for examination will be the following—viz., (1) classics; (2) mathematical science; and (3) mental and moral science.

Mr. Charles G. Lyster died on the 14th inst. at his residence, 30, Patrick-street, Kilkenny, at a comparatively early age. The deceased held a good position in Kilkenny, was a justice of the peace for the county of Kilkenny and was a Fellow of the Royal College of Surgeons.

Dr. Edmond McWeeney, on the nomination of the Master of the Coombe Lying-in Hospital, has been appointed pathologist to the institution.

Aug. 15th.

CANADA.

(FROM OUR OWN CORRESPONDENT.)

The Ontario Medical Association.

THE thirteenth annual meeting of the Ontario Medical Association was held in this city on June 21st and 22nd last, under the presidency of Dr. R. W. Hilliary of Aurora, who in his address advocated a Dominion Medical Council and reciprocal provincial registration. Amongst the papers read were the following:—Cholelithotomy with Choledudenostomy for the Relief of Cholæmia due to Obstruction of the Common Bile-duct, by Dr. A. A. McDonald, Toronto; the Palliative Treatment of Hernia, by Dr. De Garmo of New York; the Nature of Fever and its Phenomena and Treatment, by Dr. Holemes, Chatham; Polymastia, by Dr. Burns, Toronto; and Appendicitis, by Dr. Howitt, Guelph. The president elect for next year is Dr. L. McFarlane, Toronto.

The Association of Medical Officers of Health of Ontario.

At the annual meeting of the Association of Medical Officers of Health of Ontario, which was held in Guelph on June 27th and 28th, valuable papers were presented and discussed upon subjects connected with sanitary matters.

Bulletin No. 16 of the Census Series.

Bulletin No. 16 of the census series recently issued deals with the defective classes of Canada—the insane, the deaf and dumb and the blind. Of the first-named class there were 13,355, of deaf mutes 4819, and of the latter 3368. The proportion of insane women is 88 to every 100 males; the proportion of married insane men is 15 5 in every 10,000 of the married male population; whilst the proportion is greater amongst the women, being 20 in every 10,000 of the married female population. Comparison of the returns of 1871 show that insanity is not on the increase amongst the children of the Dominion. In the former year, of those under fifteen years old, there were 6·2 males and 5·03 females per 10,000, as against 5 05 and 3 8 for 1891. An analysis of the figures shows that native born Canadians do not contribute their proportionate share, but that it is largely an imported evil. The native born Canadians are nearly nineteen times more numerous than the English born, but they have only twelve times the number of insane. In comparison with the Irish born the figures are as 28 to 7, and with the Scotch born as 37 to 18, and the report adds that, it is somewhat suggestive that the same conditions exist with respect to the deaf and dumb and the blind. The foreign born population, which is less than one-seventh of the whole, contributed one-fourth of the deaf and one-third of the blind. In answering the question, "Has insanity increased in Canada?" the statistician compares the census returns of 1871 with those of 1891, and shows that in the provinces of Ontario, Quebec, New Brunswick, and Nova Scotia the insane have increased in the twenty years to 34 4 per cent., whilst the increase in the population has been only 23·5 per cent.; an analysis of the figures shows that the

increase has chiefly been in the province of Ontario, to which province immigration has been largely directed during the past twenty years. The deaf and dumb in the country consist of 2590 males and 2229 females; the figures indicate that this class of the defective population has not increased more rapidly than the general. Nearly 40 per cent. have acquired the power to convey their thoughts and to receive impressions through reading and writing. The blind number 1839 males and 1529 females; of these 752 can read and write, 152 can read only and 2464 can neither read nor write. Of these, 74 per cent. belong to the non-productive class, against 70·9 per cent. of the insane and 67·5 per cent. of the deaf and dumb.

The first number of the *Dominion Medical Monthly*, under the joint editorship of Drs. W. H. B. Aikins and Nesbitt, Toronto, has appeared.

RUSSIA.

(FROM OUR OWN CORRESPONDENT.)

Cholera.

CHOLERA continues to spread in Russia. According to information received by the Medical Department between July 9th and 29th (New Style) the disease had "assumed an epidemic character" in the towns of Moscow, Kief, Orel, Tula, Bielostok and Rostof-on-Don, and in certain districts of the governments of Bessarabia, Kief, Kursk, Orel, Podolia (all parts), Tula and Kherson, in the territory of the Don Cossacks and in the Caucasian province of the Kuban. In fifteen other governments of European Russia and Siberia there have been single cases of cholera amongst persons coming from Moscow or other affected towns, or amongst emigrants and convicts, but not a single case has occurred in these governments amongst the local inhabitants. Finally, in each of the following governments—namely, those of Kazan, Riazan, Samara, Saratof, Simbirsk, Penza, Baku, Orenburg, Tambof, Stavropol, Ufa, Astrakhan, Tchernigof and St. Petersburg—not more than one or two suspicious cases have been reported. Cholera continues to spread in Moscow. Between July 31st and Aug. 4th there were returned 121 cases and 43 deaths from the ancient capital. I was enabled last week, through the courtesy of Dr. Klin, the senior physician, and Dr. Iszler, who has charge of the cholera wards, to see all the patients then under treatment for cholera in the First Municipal Hospital in Moscow. The patients are drawn exclusively from the labouring classes; they come from all quarters of the city, showing that the epidemic is not confined to any particular quarter. The cases are somewhat less severe than those which were admitted last year. In a large proportion of the cases the disease had developed after a drinking bout. The treatment adopted has been much the same as that employed last summer in the hospitals in St. Petersburg, save that the use of copious hypodermic injections (Cantani's "hypodermoclysis") has been abandoned. In the experience of the observers at this hospital no permanent benefit followed the use of the injections, and cases in which they were not employed appeared to do as well as those in which they were given. Hot baths, hot rectal injections containing tannic acid, and the internal administration of calomel have all proved useful at this hospital in the treatment of cholera. The few cases of cholera which had been reported in St. Petersburg have been proved by bacteriological examination of the dejecta to be cases of gastro-intestinal catarrh and not those of Asiatic cholera.

Hydrophobia at Kharkof.

Thirty-one persons were admitted last week into the Pasteur Institute at Kharkof suffering from injuries inflicted by a rabid wolf. The animal first appeared in a village in the Kursk government and ran through five other villages before it was killed. In its course it severely bit forty persons and tore to pieces a child. Of those admitted to the Kharkof Institute five only are adults; the remainder are under eleven years of age. In all the cases the injuries are of an extremely severe character and in many will alone be sufficient to cause death. Six patients have each lost one eye; in one patient the whole of the scalp was torn off. In all the cases a course of protective inoculations was at once commenced.

St. Petersburg, Aug. 12th, 1893.

Obituary.

PERCY HENRY WHITE, M.B., C.M. EDIN., M.R.C.S., L.D S. R.C.S. ENG.

WE regret to have to record the death of Dr. Percy White, which occurred on July 24th from an attack of typhoid fever. Dr. White was born at Norwich on Dec. 25th, 1855, and was the fourth son of the late Mr. Richard White of Heathfield House, Norwich, who was the President of the British Dental Association for the year 1885–86. He was educated first privately and later at King Edward VI.'s Grammar School, Norwich. Subsequently he became a pupil under Mr. W. Cadge, F.R.C.S., at the Norfolk and Norwich Hospital and afterwards he continued his studies at Edinburgh University, where he took the degrees of M.B., C.M. in 1878. He next spent about a year at St. Thomas's Hospital and then obtained the M.R.C.S. Eng. He was for some two years house surgeon at St. Mark's Hospital for Fistula and commenced private practice at Woking in 1883. Eventually, however, he decided to adopt dental surgery, and leaving Woking he studied at the National Dental Hospital and obtained the L.D.S. R.C.S.Eng. in 1890. In 1891 he was appointed assistant surgeon to the National Dental Hospital. He had for some years been in practice with Dr. A. G. Medwin, and was rising rapidly in his profession with a bright prospect before him of a most successful career when he was fatally stricken in the prime of life.

Dr. Percy White was a Freemason and served the office of W.M. of the Weyside Lodge, Woking, in 1892; indeed, it was only on June 27th, on the occasion of the installation of his successor by himself, that he was last seen by the writer of this notice. He was then apparently in his usual health and good spirits, full of life and geniality and with a kind and cheerful word for everybody. A few days later he was attacked by the illness which was, alas, to prove fatal. His premature death is greatly lamented by his many friends. Dr. Percy White leaves four brothers, who are all connected either with the medical, or the dental profession.

THE INTERNATIONAL MEDICAL CONGRESS: EMERGENCY MEETING OF THE EXECUTIVE COMMITTEE.

OUR own correspondent, under date Rome the 16th inst., writes:—"A glimpse into the proceedings of the executive committee which culminated in the resolution to postpone the meeting of the Congress until next year will be not uninteresting to your readers. The advisability of postponement had, it seems, been brought before the executive committee as early as the end of April last; but, on its having been ascertained that the *foci* of cholera were limited in France to a few places and in Austria to the frontier, and, moreover, that the committees, foreign as well as Italian, after being sounded on the postponement question, had, on the whole, pronounced against it, the executive committee decided on adhering to the date of meeting already fixed—a departure from it being, in the opinion of Dr. Baccelli and his colleagues, justifiable only under the condition that the public health of Europe was so compromised as to force the physicians of the affected countries to remain at their posts. From that date (the close of April last) the sanitary state of Europe underwent such changes for the worse that the executive committee, which at the conclusion of the previous sitting had decided on rediscussing the question on another occasion should necessity for it arise, had to assemble in haste on the 30th ult. By that time the spread of cholera in France, Austria, Hungary and Russia was gravely *en évidence*, the appearance of *foci* of the disease in well-nigh all the countries of Europe was matter of almost daily occurrence and a majority of these had issued orders detaining their public health officers at their respective posts. In view of the situation so developed, and in acknowledgment of the opinions expressed by distinguished authorities, both foreign and Italian—opinions

reinforced by numerous letters from practitioners throughout Europe revoking their engagement to assist at the Congress in September—the executive committee resolved to postpone the meeting till the next best opportunity—viz., April of 1894—a season when, as experience has shown, the *foci* of infectious disease in general and of cholera in particular are either wholly or in great part extinguished. In adopting this resolution the executive committee felt strongly the necessity of maintaining the strictly international composition and complexion of the Congress, due respect being had to the foreign participants in the gathering who, in an overwhelming majority of instances, found themselves compelled by the sanitary outlook, if not indeed by present danger, to hold themselves in readiness at their several posts. Before making public its deliberation to postpone the Congress the executive committee was at pains to inform itself by telegraph of the opinions entertained on the subject by the presidents of the organising committees of the nineteen sections over which the agenda of the meeting had been distributed, and also of the views held on the same by those members of the executive committee itself who were unavoidably absent from the meeting of July 30th. The answers received were in the following proportion: of thirty-five members interpellated twenty-six pronounced unequivocally in favour of the postponement, and only eight in favour of adhering to the day of meeting as originally fixed."

Medical News.

UNIVERSITY OF LONDON.—INTERMEDIATE EXAMINATION IN MEDICINE, JULY, 1893.—The following gentlemen have passed this Examination:—

Entire Examination.—First Division: C. W. Alford, Middlesex and Gower-street Laboratory; H. L. Barnard, London; J. A. Belcher, University College; R. A. Bennett, Queen's and Mason College, Birmingham; J. H. Bodman, Bristol Medical School; J. A. O. Briggs, St. Bartholomew's; P. K. Byrne, B.A., University College; J. A. Clough, Yorkshire College; H. H. Greenwood, Yorkshire College; and J. Owen, Liverpool. Second Division: V. J. Blake, University College; L. W. Burrow, St. Thomas's; A. G. Butler, Guy's; F. J. H. Cann, Guy's; F. B. Carter, University College; G. A. Crace-Calvert, St. Bartholomew's; Rosina Clara Despard, London School of Medicine for Women; Adele Isabella de Steiger, London School of Medicine for Women; H. P. Ferraby, Guy's; A. P. Gibbons, London; S. Gross, Leeds Medical School; E. W. H. Groves, B.Sc., St. Bartholomew's; W. Hardcastle, Charing-cross; P. H. Haylett, Guy's; A. Heath, St. Bartholomew's; J. Hussey, St. Bartholomew's; F. S. Jackson, Owens College, Manchester; T. Lambe, University College; C. H. J. Lockyer, Charing-cross; Rachel E. W. Mackenzie, Edinburgh and London Schools of Medicine; J. P. O'Hea, St. George's and St. Bartholomew's; J. E. Phillips, University College; M. H. Pike, Guy's; E. Playfair, King's College; W. A. Savage, University College; J. C. Smellie, St. Mary's and Birkbeck Institute; F. A. Smith, St. Bartholomew's; G. U. Smith, King's College; J. C. Spillane, London; H. J. Spon, Guy's; E. S. Stork, University College; R. G. Strange, St. Thomas's; A. Tafel, Owens College, Manchester; E. Thomas, University College; H. E. Thompson, St. Bartholomew's; Margaret M. Traill-Christie, London School of Medicine for Women; P. C. E. Tribe, King's College; Ethel May Vaughan, London School of Medicine for Women; H. C. Watt, University College; and Mabel Elizabeth Webb, London School of Medicine and Bedford College.

Excluding Physiology.—First Division: F. H. Atkinson, Charing-cross; J. B. Brash, University College; T. R. H. Bucknall, University College; A. J. Martineau, St. Thomas's. Second Division: R. H. Ashwin, Guy's; J. F. Bill, St. Bartholomew's and Birkbeck Institute; T. Chave, St. Bartholomew's; M. W. Coleman, St. Bartholomew's; Frances Ede, London School of Medicine for Women; J. A. K. Griffiths, University College; J. H. Hugo, St. Bartholomew's; E. Pratt, St. Bartholomew's; A. R. H. Skey, St. Bartholomew's; C. F. Steele, Bristol Medical School and Clifton Laboratory; and J. R. Steinhaeuser, Guy's.

Physiology only.—First Division: A. W. Jenkins, University College; R. M. Johnston, University College; J. E. Waite, University College. Second Division: W. Allport, Mason College, Birmingham; E. B. Bostock, Mason College, Birmingham; C. H. Caldicott, Mason College, Birmingham; A. D. Ducat, St. Bartholomew's; W. H. Holliday, Yorkshire College; D. Horwitch, Queen's and Mason Colleges, Birmingham; C. H. Mott, London; G. F. Murrell, St. Bartholomew's and University College; W. Smith, Bristol Medical School; and M. Wilks, University College.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The gentlemen enumerated on p. 348 of our issue of Aug. 5th as having been admitted Licentiates of the Royal College of Physicians of London have been admitted Members of the Royal College of Surgeons of England, with the exception of Messrs. R. E. Durell and H. T. Noyes, who did not present themselves under the regulations of the Conjoint Board. Mr. Thomas Hugh Boyd, Melbourne University and University College Hospital, has also been admitted a Member of the College.

ROYAL VICTORIA HOSPITAL, NETLEY.—H.R.H. the Duke of Connaught has just terminated his inspection of this hospital and has expressed his entire satisfaction, after a thorough examination, with all the arrangements of the hospital and with the efficiency of the work performed by the officers engaged in its administration.

ON the evening of Aug. 16th a hospital tent erected on Three Mile Hill on the London-road, near Salisbury, was destroyed by fire. The patients, who were suffering from small-pox, were rescued and transferred to another tent. It is supposed that the intense heat of the sun concentrated upon some inflammable part of the tent was the cause of the conflagration.

THE ANTI-ALCOHOL CONGRESS.—This Congress assembled at the Hague on the 16th inst. and mustered 346 delegates, of whom twenty-five were British. The inaugural address was given by M. Heenskerk, Minister of State. Sir Dyce Duckworth M.D., then read a paper on the Physiological Effects of Alcohol, in which the moderate use of alcoholic drinks was recommended. The same advice, but in a modified form, was given in a paper on a similar subject by Dr. Schmitz of Bonn, who preferred abstinence from alcohol by healthy persons, but thought that the use of small doses habitually could do no harm. In the discussion which followed, Sir Dyce Duckworth was supported by Dr. Stockvis and Dr. Sneiders, whilst many of the delegates expressed opinions in variance with those advanced by Sir Dyce Duckworth. In the afternoon a resolution was proposed by the Rev. J. Grant Mills in favour of a further limitation of the liquor traffic in Africa, and this was unanimously adopted. The discussions were continued on the 17th inst.

BEQUESTS AND DONATIONS TO HOSPITALS.—Mr. Charles G. Palgrave, late of Fenchurch-street, London, has bequeathed £500 to the St. George's Hospital, London.—The late Mr. W. F. Low, of Wimpole-street, London, has bequeathed £100 each to the London Fever Hospital, Liverpool-road, Islington, the North London or University College Hospital.—The late Mr. F. B. Nettleingham has bequeathed £200 to the Gravesend Hospital.—The Goldsmiths' Livery Company has made a grant of £25 to the Metropolitan Dispensary.—The Mercers' Livery Company has contributed an additional donation of 50 guineas to the Royal Sea-Bathing Infirmary (offices 30, Charing-cross).—The Duke of Westminster has contributed £500 towards the funds of the Metropolitan Hospital, Kingsland-road.—The sum of £200 has been contributed towards the building of the New General Hospital, Birmingham, by the Birmingham and District Football Association, subscribed by the various clubs.—Mr. George Scott, late of Peckham, has bequeathed £500 to the London Hospital, £250 to the Aberfeldy Home or Hospital, and £1000 each to the Universities of Edinburgh and St. Andrews, for scholarships.

BRITISH POSTAL MEDICAL OFFICERS' ASSOCIATION.—The first annual dinner of the medical officers of the British Postal Service was held on the 6th ult. in the Grand Hotel, Trafalgar-square, London. Dr. Matthew Coates of Streatham occupied the chair and the following gentlemen were present: Dr. Adeney (Tunbridge Wells), Dr. Anderson (Hampstead), Mr. Brown (Wandsworth), Mr. Dunn (Wolverhampton), Dr. Giddings (Nottingham), Mr. Husband (Manchester), Mr. Iliffe (Derby), Dr. Lough (London), Mr. Moone (Exeter), Mr. O'Connor (Greenwich), Dr. Paramore (London), Mr. Phillips (Haverfordwest), Dr. Powell (London), Mr. Roberts (Reading), Mr. Thornton (Margate), Mr. Walker (Middlesbrough), Dr. Watson (Manchester), Dr. Wayte (Croydon), Mr. Weston (Stafford), and Mr. Wright (London). After dinner the usual toasts, including that of "The Postal Medical Service," were given and received with considerable enthusiasm and a very pleasant evening was passed. Prior to the dinner a meeting was held in the drawing-room of the hotel, when, Dr. Coates having been called to the chair, it was unanimously agreed, on the proposition of Dr. Watson, seconded by Dr. Lough, "That an Association of British Postal Medical Officers should be formed," and subsequently, in order to carry out and promote this decision, the committee, vested with full powers, was constituted as follows: Dr. Adeney, Dr. Coates, Mr. Dunn, Mr. Husband, Mr. Thornton, Mr. Walker, and Mr. Wright, with Dr. Giddings as honorary secretary and treasurer and Mr. Donegan (Glasgow) as honorary secretary for Scotland. Mr. Frank Iliffe of Derby has been elected president of the association for the ensuing year.

MEDICAL MAGISTRATE.—Dr. A. Cameron has been placed on the Commission of the Peace for the county of Banff.

Dr. O. C. PENRHYS EVANS has obtained the Government grant for successful vaccination at Kidderminster.

LITERARY INTELLIGENCE.—Messrs. Wm. Wood and Co. announce the early issue of a work entitled "A System of Medical Jurisprudence and Toxicology." The publishers state that the volume will be prepared by experts of acknowledged authority in these associated subjects under the supervision and editorship of Dr. R. A. Witthaus and Mr. Tracy C. Becker, LL.B., of Buffalo, N.Y.

INFECTIOUS DISEASE.—On the 11th inst. an important order was promulgated in the Royal Ordnance Factories, Woolwich Arsenal, in reference to infectious disease. The order recites that all persons employed in the said factories are prohibited from coming to their work at any time when infectious disease is present in their households or in the house in which they reside and that they shall moreover notify the fact to the medical officer of the factory in order that steps may be taken to have the diseased person isolated or removed to hospital. To cover the time occupied in such removal, and for necessary disinfection, full pay will be allowed for one week on the production of a certificate from the medical officer. On the expiration of the week the issue of pay will cease, but the person must continue to absent himself from work until he is declared by the medical officer of the factory to be free from infection.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Marking of Imported Foods.

THE Report of the Select Committee appointed to consider whether legislation is required in the direction of indicating by means of marking the quality of certain foods imported into this country has just been published. The report deals chiefly with meat, as being that form of imported food which leads itself more readily to marking. The systems in vogue in foreign countries in this regard are detailed; then Bills dealing with this subject are enumerated; statistics of meat produced in the United Kingdom and imported from abroad are given, along with a statement of the several classes of imported meat and their distinctive characters. Then follows information as to the prices of meat &c. The rights of consumers and the grievances of agriculturists are then dealt with. Finally, the opinions of experts in the colonial and foreign trade, of the Board of Agriculture and the official view are given, followed by a description of the several methods of marking employed abroad as well as at home. The chief recommendations appended to the report are as follows: "1. That every person dealing in imported meat should register as such and should affix a notice plainly exhibited over his shop that he is registered as a dealer in imported meat. 2. That the inspection of retail butchers' shops be made in the same way as under the Food and Drugs Act by duly qualified inspectors."

Isolation Hospitals.

A Bill entitled an Act for enabling County Councils to promote the establishment of hospitals for the reception of patients suffering from infectious diseases has been brought down from the Lords and has been ordered by the House of Commons to be printed. This Act is not to extend to Scotland or Ireland, or to the administrative county of London, or to any county borough, without the consent of the council of a borough containing less than 10,000 inhabitants. The mode in which an application may be made by any county council for the establishment of an infectious disease hospital is set forth. The county council may direct an inquiry to be made by the medical officer of health of the county into the necessity of providing such hospital, its proper site, and so forth; and at the conclusion of such inquiry the county council shall make an order either dismissing the petition or constituting a hospital district and directing an isolation hospital to be established. The constitution of such hospital district is then defined and its powers are specified; every isolation hospital shall be provided with an ambulance for the purpose of conveying patients to and from the hospital, and additional accommodation may be provided in the shape of tents &c. Subject to any regulations which may from time to time be sanctioned by the Local Government Board, a hospital committee may make arrangements for the training of nurses for attendance on infectious patients. Lastly, definitions are given of terms used in the Act. The Bill was read a second time on Tuesday last.

THE HOUSE OF COMMONS.

THURSDAY, AUG. 10TH.

Swine Fever.

The House went into committee on the Contagious Diseases (Animals) (Swine Fever) Bill, when the discussion on the first clause was almost wholly confined to the financial aspects of this part of the measure, which finally passed through committee.

The Bill for the Prevention of Cruelty to Children.

On the motion of Sir R. Webster the order for the committee stage of this Bill was discharged and the measure was withdrawn.

Treatment of Sewage.

Mr. H Fowler gave a rather elaborate reply to a question put by Mr. Mather on this subject. The right hon. gentleman said it was the invariable practice of the Local Government Board to decline to authorise a loan for any scheme of sewage-disposal unless it provided that the sewage should be purified by being passed through land before being discharged into a stream to which the Rivers Pollution Prevention Act, 1876, applied. The application of other means of purification, save in exceptional cases, was not considered by the Board to be sufficient. As to the acquisition of land for the purpose specified that was a question which might demand investigation, but the inspectors of the Board were watching the processes which had been recommended in connexion with sewerage schemes.

MONDAY, AUG. 14TH.

Typhoid Fever.

Sir C. Cameron asked the Secretary for Scotland if his attention had been drawn to the fact that eighteen households at Auchintibber, Lanarkshire, had been threatened with eviction in consequence of an outbreak of enteric fever in the village, presumably as the result of a contaminated water-supply, and whether any steps had been taken by the sanitary authority towards obtaining a purer supply.—Sir G. Trevelyan said, in reply, that attention had been called to the outbreak in question in October last by the annual report of the medical officer of health. The local authority obtained a decree from the sheriff requiring the proprietors to introduce a purer supply. There was, however, a difficulty in meeting that demand, as pure water was not to be had in the locality, so that the proprietors had to serve notices to quit on the occupiers. The local authority had, however, undertaken a costly scheme to furnish the whole of the middle ward of Lanarkshire with an abundant supply of pure water.

Alleged Sweating in a Small-Arms Factory.

Mr. Woodhall, in replying to a question put by Mr. Macdonald, who asked if representations had been made to the War Department respecting subcontracting and sweating in the London Small-Arms Factory at Bow, said a careful inquiry had been made by the Director of Contracts and changes had been made which it was hoped would effect such improvements as would remove just causes of complaint. This result would be attained by the wages of the employés being paid by the company's own cashier rather than by intermediaries in the shape of subcontractors.

Royal Commission on Opium.

Replying to a question put by Sir J. Gorst, Mr. G. Russell said no appointments had as yet been made to the above Commission, but steps had been taken to ascertain if certain gentlemen would be willing to serve if appointed. The cost of the Commission would necessarily be large, but no decision had as yet been arrived at by the Government on the question as to the source whence the expenditure was to be met.

Working Men's Dwellings Bill.

Mr. Wrightson having asked if the Government were prepared to offer facilities for the passing of the above measure this session, Mr. H. Fowler replied that though a promise had been made by the Government to help in passing the Working Men's Dwellings Bill this session it was conditional on the understanding that certain amendments proposed by the Government should be accepted. The right hon. gentleman was sorry not to be in a position to offer any facilities for the passing of the measure in the present session.

Housing of the Working Classes Bill.

The order for the second reading of this Bill—a kindred one to the foregoing—was discharged and the Bill was withdrawn.

TUESDAY, AUG. 15TH.

The Police and Sanitary Committee.

Mr. Asquith, in reply to a question put by Mr. Long on the above subject, said the report of the Police and Sanitary Committee was now receiving consideration, but he was not at present prepared to state what was the decision arrived at by the committee.

THURSDAY, AUG. 17TH.

Dublin Main Drainage Scheme.

Mr. William Field asked the Secretary of State for War whether his attention had been directed to the resolution unanimously passed at a great labour meeting held in Phœnix Park last Sunday, which condemned the delay alleged to be caused by the War Office and Treasury Departments in commencing the Dublin main drainage scheme, as the health and convenience of the city were injured by the present condition of the River Liffey, and protesting against the waste of valuable fine weather for such operations, and the omission of giving much needed employment; also whether he would

expedite arrangements, so that the works might be begun at once.—Mr. Campbell-Bannerman: Yes, sir, in view of the improved state of health of the troops in Dublin, which may be looked for in the event of an efficient system of drainage being carried out for the city of Dublin, I can assure my hon. friend that I am as anxious as the corporation can be to facilitate its completion, but the Army Sanitary Committee have reported that the scheme proposed would be fraught with serious danger to the health of the garrison of Pigeon House Fort, and negotiations are in progress for the transfer to the corporation of Dublin of the site of that fort.

The Marking of Foreign Meat.

Mr. Yerburgh asked the President of the Board of Agriculture whether he proposed to bring in a Bill to carry out the recommendations of the Lords' Committee upon the marking of foreign and colonial meat.—Mr. Mundella, who replied to the question, said that the report had only just been presented, and he had had no opportunity of considering it. He had not yet seen the evidence taken by the committee. In these circumstances he was unable to make any statement on the subject.

The Aldershot Manœuvres.

Mr. Jeffreys asked the Secretary of State for War what casualties (if any) occurred amongst the troops employed in the recent manœuvres at Aldershot and whether due precautions were taken so that the troops were not unnecessarily exposed to the extreme heat of the day.

Mr. Campbell Bannerman replied by reading the report received from the General Commanding at Aldershot: "I took all precautions to save fatigue to the volunteers. The extreme distance marched by any of them prior to the commencement of operations on Aug. 9th was five miles and a half and officers were detailed as guides to show the nearest route. The day was very hot and mainly in consequence of the heat eight men were admitted to hospital, of whom I regret to say one died. He was nearly sixty years of age and had been allowed to prolong his service as being a very good shot. He was taken to the hospital in an ambulance and every attention was paid to him. There were no casualties on other days."

Sir Julian Goldsmid asked whether it was right that troops should be exercised during this extreme heat.

Mr. Campbell-Bannerman replied that he could not conceive that the General officer would not have regard to the heat, but he doubted whether there was any occasion for his (Mr. Campbell-Bannerman's) interference.

Dr. Farquharson asked whether it was not the case that a considerable number of men fell out, and the explanation was that they had not had sufficient breakfast.

Mr. Campbell-Bannerman replied that he had read from all the information in his possession.

Indian Fairs and Cholera.

Referring to a resolution passed in the section of Public Health at the recent meeting of the British Medical Association in reference to the effect of the Hurdwar and other Indian fairs in promoting the spread of cholera, Mr. George Russell said the Secretary of State for India had not yet seen the resolution in question, but he had seen abstract reports of some of the proceedings and addresses at the meeting. The Government of India had for some years past made efforts to prevent the occurrence of epidemic cholera at, and its spread from, the great fairs and religious gatherings by instituting strict sanitary control at and around such fairs and gatherings. He was glad to say that the great fair at Hurdwar in the present year passed off without spreading cholera. These efforts would be continued by all authorities in India. Regarding the cholera at the Moslem holy places the Under Secretary for Foreign Affairs had recently given answers in that House. So far as the assistance of the Government of India could second the arrangements of the Porte for preventing the occurrence of cholera at Mecca, Medina and the Red Sea ports such assistance would be readily given.

The Spread of Anthrax.

Mr. Jeffreys asked the President of the Board of Agriculture how many herds of cattle in England were suffering from anthrax at the present time and what precautions had been taken to prevent the disease from spreading.—Mr. Herbert Gardner replied that anthrax was reported to exist on thirteen farms in England during the week ended the 12th inst. The measures taken to prevent the spreading of the disease were set out in a general order issued by him on Dec. 16th last. The disease was due to the entrance into the blood of a minute bacillus, which grew from spores or seeds, and the difficulty of dealing with it was due to the fact that it was practically impossible to prevent those microscopic organisms from being conveyed into stables and fields.

Appointments.

Successful candidates for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ADAM, J. L., M.B., C.M. Aberd., has been reappointed Honorary Surgeon to the Lewes Victoria Hospital.

BALLANCE, H. STANLEY, M.B., B.S. Lond., has been appointed Resident Medical Officer to the Hospital for Consumption and Diseases of the Chest, Brompton, vice Allden, resigned.

CARRUTHERS, E. J. W., M.B., C.M. Edin., has been appointed Junior Resident Medical Officer to the Hospital for Sick Children, Pendlebury, Manchester.

COURTENAY, K. J., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Wareham No. 1 and Morden Sanitary Districts of the Wareham and Purbeck Union.

DODD, PERCY V., M.A., M.R.C.S., L.R.C.P. Lond., has been reappointed Assistant Medical Officer of Health for Folkestone.

FULLERTON, F. W., M.B., B.S. Durh., M.R.C.S., L.R.C.P. Lond., has been appointed Junior Assistant House Surgeon to the Hull Royal Infirmary, vice Sims, promoted.

GRIFFITHS, C. A., F.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to the Swansea General and Eye Hospital, vice Wood, resigned.

HOBBES, J. L., M.R.C.S., has been appointed Medical Officer for the Belbroughton Sanitary District of the Bromsgrove Union.

JONES, JOSIAH H., L.S.A. Lond., D.P.H. Camb., has been appointed Medical Officer of Health for the Crewe Urban Sanitary District of the Nantwich Union.

MACKAY, J. D., M.B., M.S. Edin., has been appointed Medical Officer for the Knaresborough Sanitary District of the Knaresborough Union.

MAURICE, M. O., M.R.C.S., L.R.C.P. Lond., has been appointed Resident Clinical Assistant to the Marylebone Infirmary.

MITCHELL, P., M.D., M.S. Aberd., has been appointed Parochial Medical Officer for Oyne.

MORLEY, H. W., M.R.C.S., L.R.C.P., has been appointed Assistant House Surgeon to the Royal Portsmouth, Portsea and Gosport Hospital, vice Bliss, resigned.

ONOXEY, VINCENT, M.R.C.S., L.R.C.P., has been appointed Registrar to the National Orthopædic Hospital, Great Portland-street.

VASSALLI, J. S., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of Health and Public Vaccinator for the Western Sanitary District of the Scarborough Union, vice Douglas, resigned.

WILLETT, G. G. D., M.R.C.S., has been reappointed Medical Officer for the Bitton and Marksbury Sanitary Districts of the Keynsham Union.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BOROUGH OF CHESTERFIELD.—Medical Officer of Health for the Urban Sanitary District of the Borough. Salary at the rate of £200 per annum.

DENBIGHSHIRE INFIRMARY, Denbigh.—House Surgeon. Salary £85 per annum, with board, residence and washing in the house. At the end of year's engagement, if satisfactory, a gratuity of £15 is given by the committee.

GENERAL HOSPITAL, Birmingham.—House Physician for one year. Salary £70 per annum, with residence, board and washing.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—House Surgeon for six months. Salary at the rate of 50 guineas per annum, with residence in the hospital, board and washing.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—Junior House Surgeon for six months. Residence in the Hospital, with board and washing provided, and an honorarium of 5 guineas on satisfactory completion of term of appointment.

NATIONAL DENTAL HOSPITAL, Great Portland-street, W.—Assistant Dental Surgeon.

ROYAL UNITED HOSPITAL, Bath.—House Surgeon for one year. Salary £60, with board, lodging and washing.

SHEFFIELD GENERAL INFIRMARY.—Assistant House Surgeon. Salary £80 per annum, with board, lodging and washing.

SHEFFIELD SCHOOL OF MEDICINE.—Tutor, to take Charge of Dissecting-room and hold Classes in Anatomy and Physiology. Salary £125.

STAFFORD GENERAL INFIRMARY, Stafford.—Assistant House Surgeon. Board and Residence in the hospital provided.

ST. LUKE'S HOSPITAL, London, E.C.—Clinical Assistant for six months. Board and residence provided.

ST. PETER'S HOSPITAL FOR STONE AND URINARY DISEASES &c., Henrietta-street, Covent-garden, W.C.—House Surgeon, for six months. Honorarium 25 guineas, board, lodging and washing.

TAUNTON AND SOMERSET HOSPITAL, Taunton.—Qualified Dispenser. Salary £100.

TEIGNMOUTH, DAWLISH AND NEWTON INFIRMARY, DISPENSARY AND CONVALESCENT HOME.—House Surgeon and to act also as Secretary. Salary £60 per annum, with board lodging and washing.

UNIVERSITY OF ABERDEEN.—Examiners in Medicine.

WESTON-SUPER-MARE HOSPITAL AND DISPENSARY.—Medical Officer to the Provident Dispensary. Salary £60 per annum, with board, lodging and washing.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—House Surgeon for one year, who will also be required to act as Surgical Registrar. Salary £100, with board, lodging and washing.

WORCESTER COUNTY AND CITY LUNATIC ASYLUM.—Third Assistant Medical Officer, unmarried. Salary £100 per annum, with board, lodging and washing. Applications to Dr. Cooke, The Asylum, Powick, near Worcester.

Births, Marriages and Deaths.

BIRTHS.

COLLYNS.—On Aug. 8th, at the Green, Dulverton, the wife of R. J. Collyns, Esq., L.R.C.P., M.R.C.S., of a son.

CRUESEMANN.—On Aug. 10th, at Trinity-road, Upper Tooting, the wife of Dr. Eduard Cruesemann, of a daughter.

DICKSON.—On Aug. 7th, at Vincent-square, Westminster, S.W., the wife of Herbert E. B. Dickson, L.R.C.P., L.R.C.S., of a son.

FASKEN.—On Aug. 15th, at Fairholme-road, West Kensington, the wife of Surgeon E. Drummond Fasken, R.N., H.M.S. *Wye*, of a daughter.

HEWER.—On July 19th, at Pollibetta, South Coorg, India, the wife of A. A. Hewer, M.B., of a son.

MOORE.—On Aug. 14th, at Lee-road, Blackheath, the wife of Edward J. Moore, M.A., B.M., B.Ch. Oxon, of a daughter.

PAYNE.—On Aug. 12th, at Holmewood-road, South Norwood, S.E., the wife of William Henry Payne, M.R.C.S., L.R.C.P. Lond., of a son.

PENNY.—On Aug. 11th, at Castletown-road, West Kensington, the wife of Edmund J. Penny, M.D., of a son.

RUFFER.—On Aug. 12th, at York-terrace, N.W., the wife of Dr. M. Armand Ruffer, of a daughter.

SCARTH.—On Aug. 9th, at Amwell-street, E.C., the wife of Isaac Scarth, B.S. and M.B. Lond., M.R.C.S. &c., of Stanghow, Yorks, and Amwell-street, London, of a son.

THORPE.—At Newport, Salop, on the 8th inst., the wife of Arnold E. Thorpe, L.R.C.P., L.R.C.S. Edin., of a daughter.

WHITELOCKE.—On Aug. 13th, at Oxford, the wife of R. Henry Anglin Whitelocke, M.B., M.C., F.R.C.S. Eng., of a son.

MARRIAGES.

CRAMPTON—BERRIDGE.—On Aug. 2nd, at Ratley Church, by the Rev. J. Rowbotham, assisted by Rev. A. Blythman and Rev. C. Parker, Chaplain to Royal Free Hospital, Thomas Hobbs Crampton, L.R.C.P., L.R.C.S. Irel., Myddelton-square, London, to Augusta, youngest daughter of Thomas W. Berridge, The Uplands, Banbury.

FRASER—LENEY.—On Aug. 9th, at All Saints' Church, West Ferleigh, Kent, Frank Fraser, M.D., of Leigh, Kent, to Constance Frederica Leney, only daughter of Mrs. Charles F. Leney, of Folkestone, Kent.

HOPSON—THATCHER.—On Aug. 9th, at St. Mary Abbot's, South Kensington, by the Rev. J. S. Clementson, M.A., Montagu Frank Hopson, L.D.S. Eng., of Grove House, Rosslyn-hill, Hampstead, N.W., youngest son of Joseph Hopson, The Croft, Newbury, to Eva Kate, second daughter of John Thatcher, Enbourne, Newbury.

JAMES—ASHWIN.—On Aug. 9th, at St. James's, Alveston, Warwickshire, John Angell James, M.R.C.S., L.R.C.P. Lond, of Odiham, Hants, to Emily Cormell Ashwin, third daughter of Manley Cormell Ashwin, of Tiddington, Stratford-on-Avon.

KINLOCH—DUFRESNE.—On July 28th, at the Palace, Montreal, Canada, John Alexander Kinloch, M.D., C.M., M.R.C.S., to Ruby Marguerite Marie Dufresne, youngest daughter of Charles Dufresne, Esq., Bray, Ireland.

LIVEING—BROWN.—On Aug. 15th, at The Rectory Church, St. Marylebone, Edward Liveing, M.D., of Queen Anne-street, London, to Harriet Susan, eldest daughter of the Rev. J. Wilson D. Brown, Vicar of Assington, Suffolk.

MELVILLE—MUSSON.—On Aug. 5th, at Christ Church, Chatburn, Charles H. Melville, Surgeon Captain A. M. S., to Annie Cecilia, daughter of William Edward Musson, of Mayfield, Clitheroe.

WHITTINGDALE—JENNINGS.—On Aug. 10th, at Oborne, near Sherborne, John Flasby Lawrance Whittingdale, B.A., M.B. Cantab., to Marie Irene Jennings.

DEATHS.

ASHWORTH.—On July 2nd, at the Costa Rica Railway Company's Hospital, Port Limon, of yellow fever, W. Rushton Ashworth, L.R.C.P. Lond., M.R.C.S. Eng. (Westminster Hospital), Resident Surgeon, aged 27 years.

BEARD.—On Aug 13th, at his residence, Welbeck-street, London, Francis Carr Beard, F.R.C.S., aged 78 years.

BULLOCK.—On Sunday, Aug. 13th, 1893, at his residence, Overtown House, Spring-grove, Isleworth, Henry Bullock, F.R.C.S., eldest son of the late Rev. Thomas Bullock, of Chisledon, Wilts, aged 54.

DURHAM.—On Aug. 6th, at the London Fever Hospital, of virulent diphtheria, contracted whilst on duty as acting resident medical officer, Arthur Ellis Durham, M.A., M.B., B.C. (late scholar of Christ's College, Cambridge and student of Guy's Hospital), aged 28, eldest son of Arthur E. Durham, F.R.C.S., of 82, Brook-street, W., and Guy's Hospital.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, August 17th, 1893.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Aug. 11	30·08	S.W.	69	66	121	82	64	..	Cloudy
,, 12	30·15	S.W.	68	67	108	81	65	·13	Overcast
,, 13	30·20	N.E.	74	70	117	82	64	..	Hazy
,, 14	30·26	S.E.	70	64	121	85	64	..	Hazy
,, 15	30·20	S.E.	72	67	119	89	66	..	Hazy
,, 16	30·11	S.W.	73	67	134	93	65	..	Fine
,, 17	30·06	S.W.	74	68	127	93	67	..	Fine

Medical Diary for the ensuing Week.

Monday, August 21.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays, at the same hour.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; and on Tuesday, Wednesday, Friday, and Saturday at the same hour.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2.30 P.M.; Friday, 2 P.M.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M.; and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2 P.M.; Thursday, 2 P.M.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.; and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

UNIVERSITY COLLEGE HOSPITAL. Ear and Throat Department, 9 A.M.; Thursday, 9 A.M. Eye Department, 2 P.M.

Tuesday, August 22.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M. Skin Department, 1.45; Saturday, 9.15.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electrotherapeutics, same day, 2 P.M.

Wednesday, August 23.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1.30 P.M.; Saturdays, 2 P.M. Obstetrical Operations, Thursdays, 2 P.M.

CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M.; Thursday and Saturday, same hour.

ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M. Dental Department, 9.30 A.M. Eye Department, 2 P.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M. Surgical Visits on Wednesday and Saturday at 9.15 A.M.

Thursday, August 24.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M. Ear and Throat Department, 9 A.M. Eye Department, 2 P.M.

Friday, August 25.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Eye Department, 2 P.M.

Saturday, August 26.

UNIVERSITY COLLEGE HOSPITAL.—Skin Department, 9.15 A.M.

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

PUBLISHER'S NOTICE.

IN order to facilitate the work of reference to the volumes of THE LANCET, we have arranged to publish duplicate copies of the Index to each half-yearly volume in a form in which they may be subsequently filed or bound together. Those of our subscribers who may wish to be supplied with loose copies can obtain the same (without extra charge) on making application to the Publisher of THE LANCET.

AMERICAN MUNIFICENCE.

EUROPEAN in origin and constitution, the Red Cross Association, for the relief and tendance of the wounded in time of war, has no heartier or more generous friends than our American cousins, who have a Red Cross Association of their own which in point of endowment and organisation has nothing to equal it in the Old World. Of all the gifts recently made to the cause the handsomest comes from an American—a physician be it noted—Dr. Joseph P. Gardner. This gentleman has ceded to the "American Red Cross," free from all burdens and with fullest proprietary rights *in perpetuum*, a park some thousand acres in extent. This noble piece of land is situated in the State of Indiana, and comprises a village and post-office, besides farmhouses, each with its grange and orchard; whilst it is rich in woods, quarries and water-supply, including a considerable stream and many natural springs. It is threaded by railways in all directions and is designed for the storing of provisions and medical supplies available, by immediate transport, for whatever emergency the Red Cross includes in its sphere of operations.

WOUND OF THE LINGUAL AND EXTERNAL CAROTID ARTERIES.

To the Editors of THE LANCET.

SIRS,—The following case may be of interest to readers of THE LANCET:—A man aged twenty-five, single, came under my observation at sea at 7.45 A.M. on Dec. 3rd, 1892, bleeding profusely from a wound on the right side of the neck, situated about one inch below and in front of the angle of the jaw, having been caused by the bursting of a ginger-ale bottle. On examination the incision was found to be a clean incised cut and the direction of the wound was from before, backwards and downwards, and was fully one inch in depth, the glass having probably severed the lingual artery and numerous veins. Treatment by torsion effectually stopped the hæmorrhage; but three hours afterwards it returned with great violence. I opened up the wound and found the superficial arteries were not bleeding. The arterial and venous blood was welling up from the bottom of the wound, which was situated near or upon the external carotid artery. The patient at this time was in a semi-comatose condition; the face and lips were blanched, the perspiration was free and the radial pulse imperceptible. I applied torsion, and strong tincture of perchloride of iron to the fundus of the wound with a camel's-hair brush, adding a pad of lint, and over the lint a small sponge, with relays of men to keep the whole in position by digital compression, the patient to remain perfectly at rest. After the expiration of twelve hours beef-tea was administered by teaspoonfuls frequently; digital compression was continued for 120 hours, when the wound was dressed with boracic lotion and the edges drawn together with plaster. From Dec. 9th, 1892, he has taken solid food and is now in perfect health.

I am, Sirs, yours faithfully,

F. A. HOLMDEN, M.B., C.M.
R.M.S. *Hawarden Castle.* Surgeon to the Castle Royal Mail Line.

"THE ICE-SUPPLY OF LONDON."

WE have read with interest a communication sent to us by a firm who manufacture artificial ice and think it would be well if the system described could be universally adopted. As a matter of fact, however, one result of our inquiry was to show that the bulk of the ice supplied to restaurants in London was of natural origin. Our report distinctly indicated that artificial ice was preferable, and especially that made from freshly distilled water, and we should be glad to learn that such a commodity was exclusively employed, at least for actual human consumption.

"DEATH UNDER CHLOROFORM."

WE shall be greatly obliged if the gentleman who kindly furnished us with an account of a case of tumour of the larynx (in which the patient died under chloroform), which occurred, we think, at an infirmary in the East-end of London, will be so good as to communicate with us again, as his letter has been mislaid.

MEDICAL MEN'S CHARGES.

To the Editors of THE LANCET.

SIRS,—My experience to-day in the Lambeth County Court may be interesting to those medical men who have the misfortune to reside within the jurisdiction of that court. I sued a man for £7 10*s.* 6*d.* for attendance on his child for a severe scalp wound followed in a few days by a sharp attack of scarlet fever. In addition to this I attended other members of the family. The average fee for visit and medicine was 3*s.* 6*d.* This the registrar reduced to 2*s.* 6*d.*, saying that 3*s.* 6*d.* was excessive. I pointed out to him that the account was of twelve months' standing, that some of the visits occupied over half an hour taken up with dressing the wound &c., and that I should have to pay my collector 10 per cent. for commission. In spite of this the reduction was made and an order for 10*s.* per month granted. If this is not a direct inducement to encourage people not to pay their medical men I am at a loss to know what is. I may remark that the defendant had offered to pay the collector 10*s.* per month without disputing the amount and did not even take the trouble to appear in court. The man is in a position, as I proved, to pay the fees charged and yet the registrar goes out of his way to reduce the amount considerably and to encourage people to dispute their medical attendants' charges without sufficient reason.

I am, Sirs, yours faithfully,

Aug. 8th, 1893. A. GRAHAM.

MEDICAL ADVERTISING AT WATERING-PLACES.

Unprofessional says he was lately somewhat surprised to see in one of the hotels of a well-known watering-place, on a board on which various tradesmen's names appeared, the consultation hours of a member of the profession. He had thought that such methods were only transatlantic. It is natural that the inmates of hotels should have easy means of knowing the arrangements of local physicians; but there are other ways of providing for this than the above, and we doubt not but that they will be substituted for what is certainly not commendable.

MERCANTILE ENDS AND PROFESSIONAL MEANS.

WE have received letters on the tendency of medical men to compromise themselves by turning their professional recommendations to business uses. We cannot sufficiently denounce this tendency and warn practitioners against it.

C. P.—We cannot say that we have any knowledge of such treatment of epilepsy.

DEATH CERTIFICATION.

A CORRESPONDENT writes:—"I have been from home and have only just read your article, 'Death Certification and Coroners' Inquiries,' in THE LANCET of July 8th. In speaking of the practice of registrars you say (page 98): 'Some registrars would refer the case to the coroner, whilst others would register it as uncertified. .... Next, we may hope for some uniform rule as to dealing with these uncertified deaths. Probably to refer them all to the coroner would be the easiest solution of the difficulty.' In my opinion it is the only proper course for registrars to refer the uncertified deaths to the coroner; for in a letter dated June 19th, 1885, the Registrar-General states that registrars are therefore now instructed, before registering any deaths of either of the following descriptions, to report such deaths to the coroner—namely, (1) all deaths occasioned directly or indirectly by violence; (2) all deaths occurring under suspicious circumstances; (3) all deaths the causes of which are stated to be 'unknown'; (4) all deaths which are stated to have been 'sudden' and respecting which *no certificate issued by a registered practitioner is produced*; and (5) all deaths of infants in houses registered under the Infant Life Protection Act, 1872."

A Student.—Our correspondent's suggestion seems to be quite impracticable.

GONORRHŒA AND ITS SEQUELS.

To the Editors of THE LANCET.

SIRS—The following case may be interesting to some of your readers. About thirty years since I was consulted respecting the condition of the urethra and general health of a patient aged forty years. When a young man he had a very virulent attack of gonorrhœa. An abscess formed anteriorly to the scrotum and was opened by the late Mr. T. Moston of London. Stricture then formed anteriorly to the opening and the urethra was kept dilated for a long time by a succession of short steel bougies up to No. 12 size. Subsequently a No. 10 elastic-gum catheter was passed weekly. As the fistula remained patent the late Mr. Hamilton of Dublin was consulted, and he applied nitric acid to the orifice, and a metallic clamp, compressing the walls of the fistula, was kept in apposition for twenty-four hours, a catheter being kept in the bladder the whole of the time of its application. This answered the purpose, as soon as strict continency was observed, for about two years, and it has since continued closed; a tendency to stricture has caused the patient to pass an elastic gum catheter about once a fortnight. Within the last two years he has been advised to alter the course owing to enlarged prostate commencing, and he wounded the mucous membrane, but by substituting a very soft catheter, à boule, and applying it as seldom as possible, he gets on very well, keeping up an empty condition of the rectum by alternating doses of podophyllin, extract of belladonna and Rochelle salts. He does not micturate so frequently during the night and there is less glairy mucus and no albumen or sugar. He keeps very abstemious as regards alcoholic drinks. There is one point which has complicated the case: the patient suffers from valvular disease, requiring occasionally two or three weeks' exhibition of digitalis and nux vomica; but, although he has given up the hip-bath, he continues cold sponging and friction daily with apparent impunity all the year round.—I am, Sirs, yours faithfully,

JOHN C. RICHARDSON, M.R.C.S. Eng., L.S.A. Lond.

Herne Bay, August, 1893.

"SPOTTED TYPHUS."

FROM Odessa comes a strange story of superstition in connexion with the prevention of disease. An epidemic of "spotted typhus" having broken out in a Russian village the women of a neighbouring village, to protect themselves from infection, performed the following ceremony: At midnight they cut with a plough a furrow completely round the village. A procession was then formed to traverse the inner edge of the furrow. First came a woman carrying a domestic iron and chanting a prayer, following next in order came a woman carrying a decorated skull and the horns of an ox, followed by a female astride an oak sapling, the remainder of the procession singing an exorcist hymn. The processionists have been summoned before one of the district justiciary courts of Saratoff on the charge of creating a nocturnal disturbance of the peace.

PELLAGRA AND MALARIA.

PROFESSOR KALINDERU, writing in the *Romania Medicala*, shows that a connexion exists between pellagra and malaria inasmuch as malarial fever induces an impoverished physiological condition and thus prepares the system for the development of the disease by the alkaloidal products of the fermentation of maize. He mentions also the cases of several persons who, after being cured of pellagra, remained quite free from it as long as they were kept away from the influence of malaria and its subsequent impoverishment of the system, but when they returned to malarial localities the pellagra reappeared.

THE PRODUCTION OF CAMPHOR IN JAPAN.

FROM the British consular report from Hiogo we learn that the annual export of Japan camphor averages about 5,000,000 lb. About a quarter of this amount is sent to the United States and the rest to Europe, with the exception of a small quantity which is used in India. Although the forests owned by the natives are almost denuded of timber, it is estimated that those belonging to the Government will alone maintain the average annual supply of crude camphor during the next twenty-five years. Much attention is now being paid to the cultivation of this huge evergreen and it is expected that under scientific management trees of twenty-five or thirty years' growth will give as good results as those of seventy or eighty years, the youngest wood from which camphor has hitherto been extracted. The roots contain a much larger proportion of camphor than the trees, 10 lb. of crude camphor out of 200 lb. of wood-chips being thought satisfactory. At present the means used for obtaining the camphor are of the most unscientific description.

Enquirer.—Amongst the best works on diseases of the eyes are, in English, those of Berry, Juler, Macnamara and Hartridge; in French, De Wecker and Landolt and Galezowski.

"HIS BLUSHING HONOURS THICK UPON HIM."

To the Editors of THE LANCET.

SIRS,—My attention has been called to some judicious remarks which appeared in the last issue of THE LANCET under the above heading. It so happens that my son has been a long distance away from West Cumberland ever since the "capping day," enjoying a holiday. On his return he will be surprised to find that the *West Cumberland Times*, Shakespeare and THE LANCET have all been laid under contribution to direct public attention to the fact that he has completed his professional studies auspiciously. In his absence I wish to say that "Dr. Charles Crerar" is not in any way responsible for the paragraph which you condemn and that he will doubtless join in your condemnation of it. You truly say, on the same page, that "meddlesome persons are a very numerous host."

I am, Sirs, yours obediently,

JOHN CRERAR, M.R.C.P.Edin. &c.

Maryport, Cumberland, Aug. 14th, 1893.

CHLOROBROM AND SEA-SICKNESS.

To the Editors of THE LANCET.

SIRS,—As surgeon on the s.s. *Nestorian* sailing between Glasgow and Boston I have had considerable experience in the treatment of sea-sickness by chlorobrom. Whilst not advocating it as an infallible remedy I have come to the conclusion that it is much superior to those drugs which are ordinarily employed. I have invariably given it in small doses. After the first stage of acute vomiting I give one drachm, followed by the same dose in an hour. In a great many cases this alone will be found to afford great relief. In considering the cases which have come under my notice I have formed the opinion that chlorobrom acts not only as a hypnotic, but also as a gastric sedative; and this, taken along with the small doses employed, convinces me that in chlorobrom we have a drug of considerable value in the treatment of sea-sickness. I am, Sirs, yours faithfully,

Glasgow, Aug. 9th, 1893. ROBERT BISHOP, M.B., C.M. Glasg.

ERRATUM.—In our last issue an error of the press escaped correction in Dr. Barnes's paper on Puerperal Septicæmia. On p. 393, line 26 from top of the first col., for "Farmer" read *Tarnier*.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received:—*Scottish Leader, Drogheda Conservative, Hygiene, Journal of Horticulture, Popular Medical Monthly, Liverpool Daily Post, Bristol Mercury, Yorkshire Post, Leeds Mercury, Scotsman, City Press, Glasgow Evening News, Morning, Melbourne Leader, Science Siftings, St. James's Gazette, Times of India, People's Journal, Rochdale Observer, Southampton Times, Worcester Chronicle, Bombay Gazette, Pioneer Mail, Mining Journal, Weekly Free Press and Aberdeen Herald, West Middlesex Standard, Local Government Chronicle, Reading Mercury, Citizen, Sunday Times, Hertfordshire Mercury, Builder, Architect, Sanitary Record, The Rock, Surrey Advertiser, Local Government Journal, West Middlesex Advertiser, Retford Advertiser, Le Courrier de la Presse (Paris), Northern Daily Telegraph, News, Daily Chronicle, Nottingham Daily Express, English Mechanic, Bury Free Press, Engineer, South Wales Daily News, Midland Daily Telegraph, Launceston Examiner (Tasmania), The Deal Paper, The Sandwich Paper, Newcastle Weekly Chronicle, Evesham Journal, Glasgow Echo, Warwick Times, Le Temps (Paris), &c. &c.*

Communications, Letters &c. have been received from—

A.—Dr. T. Clifford Allbutt, Cambridge; American Dermatological Association, Secretary of, Milwaukee, Wis.; A. B., Wrexham.

B.—Dr. G. P. Bate, London; Dr. O. E. Block, Louisville, Ky.; Mr. J. A. Burford, Warwick; Mr. W. H. Booth, Plymouth; Mr. H. T. Butlin, London; Mr. C. Birchall, Liverpool; Mr. T. B. Browne, London; Messrs. Blackie and Sons, London; Messrs. Bailey and Sons, London; Bovril Co., Limited, Manager of, London; B.M., London; B., Leeds; Bago, London.

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Letters, each with enclosure, are also acknowledged from—

A.—Dr. E. Allen, Hawes; Dr. R. Ackerley, Tow Law; Alpha, St. Austell; A. W., Coventry; Ala, London; A. J. T., Norwich; Angina, London.

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